Author's response to reviews

Title: Can vouchers encourage the use of private primary care services? Evidence from Hong Kong with a tax-based financing system

Authors:

Carrie HK Yam (carrieyam@cuhk.edu.hk)
Su Liu (sliu@cuhk.edu.hk)
Olivia HY Huang (oliviahuang@cuhk.edu.hk)
EK Yeoh (yeoh_ek@cuhk.edu.hk)
Sian M Griffiths (siangriffiths@cuhk.edu.hk)

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Author's response to reviews: see over
Dear Prof. Juhani Lehto,

Re: MS: 5205769045027137
Can vouchers encourage the use of private primary care services?
Evidence from Hong Kong with a tax-based financing system
Carrie HK Yam, Su Liu, Olivia HY Huang, EK Yeoh and Sian M Griffiths

We are very grateful for your email on 18 June 2011 concerning this manuscript, and the offer to allow us to revise it in accordance with the comments of the reviewers and editorial team. The paper has been edited and revised in response to reviewer’s comments. In particular, we have re-structured and enriched the background by providing more information about the healthcare reform in Hong Kong and description of the voucher mechanism which is then linked to the literature review of other voucher programs in other countries, and laying the foundation of our motivation – that is – understanding the impact of policy change imposed by the voucher scheme on the primary care system. The changes in the text are highlighted with “tracked changes”, together with a point-by-point response to reviewer’s comments.

We appreciate this opportunity to resubmit a revised manuscript and hope that you and your reviewer will find it sufficiently improved to justify publication in the BMC Health Services Research. Thank you very much for your kind consideration.

Yours sincerely,

Prof. Sian Griffiths
Professor and Director of School of Public Health and Primary Care
The Chinese University of Hong Kong

20 July 2011
Reviewers' Comments and Authors' Responses

Title: Can vouchers encourage the use of private primary care services? Evidence from Hong Kong with a tax-based financing system

Reviewer: Simo Kokko

Reviewer's report:
General comments on the article

The article is – as such – well written and it reports a study that is adequately designed, but the main question and problem is in the fundamental objective of the study and of the whole “voucher system”. The manuscript states that the objective of the study was to assess the acceptability of vouchers to the older people. A more realistic formulation of the objective could be to ask whether the health care usage behaviour of older people would be changed by introduction of a voucher system what would cover (only) a small fraction of the total costs.

Then to the specific questions as advised,

Comment 1:
1. Is the question posed by the authors well defined?
In short, the study and the article are well-designed, but I am afraid that the title and the text keep asking the wrong question, when they assess the acceptance and use of vouchers. The right question would be to ask whether a relatively small subsidy (of about 25-35 % of the costs per encounter according to my calculations) can make a difference in the patterns of how older people use health services. How the subsidy is channelled – through a voucher of for example through direct transfers – would be of lesser interest.

Response 1:
Thank you for your insightful comment. If we had been working empirically we could have worded the question differently. However we were working with the government who had already implemented the voucher scheme so we were only able to assess the potential impact of current voucher scheme on the primary care system i.e. whether the voucher would make a difference in older people’s health seeking behaviour. Nevertheless, multiple design features of the voucher scheme (as implemented), including the subsidy amount, coverage of health services, distribution mechanism, convenience to use, etc. were examined. The question of people’s willingness to pay for private services is addressed in a different paper.

We have revised the title and objective of the study as follows to make it clear:
Title:
Can vouchers make a difference to the use of private primary care services by older people? Experience from the healthcare reform programme in Hong Kong
Our study was, of necessity given the political context and sudden policy announcement, carried out as the voucher scheme was introduced. The voucher scheme was deemed to fit well into two priority areas on the Hong Kong Government’s agenda - primary care and public-private partnership and was introduced in the Chief Executive’s policy address. We are not aware of studies done a priori to estimate the appropriate subsidy amount, or simulate the program’s potential impact before its launch. The lack of evidence was indeed the main motivation behind our current ‘real-time’ study. Our interest, as well as that of government who funded us, was whether this new policy - the introduction of a voucher scheme (as implemented) - has affected the older population’s health seeking behaviours and shifted them toward the Government’s desired healthcare reform direction of greater use of primary healthcare services in the private sector. More specifically, our main objective of the study was to assess whether the voucher program so far has realized its intended goals, and to provide lessons learned (i.e. the missing evidence before launching the program) for future program improvement and policy changes.”

Comments 2 & 3:
2. Are the methods appropriate and well described?
The methods, the overall setting and the sample are appropriate and adequately described given the existing restrictions of not having population registers or other routes to approach older people. I would assume that the general finding of there having been not much change would not have been different if the sampling would have been in more proportionate match with the actual target population.

3. Are the data sound?
See my comments to question # 2 above. The data seem to be acceptable.

Responses 2 & 3:
It is a limitation that we do not have the population register from which we could randomly sample older people in Hong Kong. Thus, we sampled the older people in outpatient clinics, elderly health centres and parks which provided a sample of both generally-well and less-healthy groups of older people. We have confirmed through comparison with Census data that the age and gender profile of our sample was similar to those of the general population, which indicated that our sample is representative.

Comment 4:
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes it does.

Comment 5:
5. Are the discussion and conclusions well balanced and adequately supported by the data?
The problem with the manuscript is in its failure to grasp (both describe and discuss) the larger picture questions of how the health services operate in Hong Kong and especially how older people behave in their use of health services. For
example, the introduction states that the vouchers were aimed at promoting use of preventive services and longer term outpatient care for chronic illnesses. No explanation is given why the system did not channel or limit the use of vouchers for these purposes only. Similarly, the text states that older people have the habit of “doctor shopping”. This would be something that a health system should try to avoid especially in the care of long term illnesses. Why were there no special incentives built into the system to encourage or incentivize continuity of care?

Response 5:
The voucher scheme was envisioned as a pilot study that fits into two priority areas on the Hong Kong Government’s agenda - primary care and public-private partnership. It was an example of politically motivated rather than evidence-based policy-making since there is no study/thorough research on the subsidy amount, the impact of voucher scheme on both users and providers etc. before launching. The lack of evidence in the policy was indeed the main motivation behind our current ad hoc study to examine whether this new policy would affect the older people’s health seeking behaviour.

We have re-structured and enriched the introduction by firstly describing the healthcare reform in Hong Kong (outlining the current structure of health services used in Hong Kong), and then followed by the description of voucher scheme which is then linked to the literature review of other voucher programs in other countries, and laying the foundation of our motivation and objectives of the study. Please refer to the revised text for the enriched Introduction session.

Our study revealed a failure of the voucher scheme to make a difference to use of private primary care services. Suggestions are given in the Discussion session on designing a designated voucher for more preventive care. We also highlight that there is a need to examine the incentives to encourage continuity of care, which is an important component of a primary care system.

(P.16 The 4th paragraph of Discussion)
“...The small proportion (7.0%) of health care vouchers used on preventive services indicated that most older people give preventive services a low priority when it comes to healthcare spending decisions. In Hong Kong, only 2.5% of the entire health expenditure is spent on disease prevention and health promotion [33]. Further consideration should be put into designing vouchers for designated use for preventive services with evidence-based practice (such as cancer screening, hypertension or diabetes management) as this would address the unmet need that is known to exist, particularly since evidence from countries around the world has shown that primary care oriented health systems produce better health outcomes [34]. Also, it requires the concerted efforts of the government, healthcare service professionals and the media to gradually induce a cultural change that puts more value and emphasis on preventive care. In addition, our study showed that older people usually see both public and private doctors as well as attend both Western trained and Traditional Chinese medicine practitioners when they are sick, implying a doctor shopping behaviour without a continuous doctor-patient relationship. One of the aims of the voucher is to promote the model of continuity of care from a family doctor. Our study does not provide information on whether
the patients will build up this continuous doctor-patient relationship with the use of vouchers. However, government statistics showed that there are early results implying that older people tend to stay with the same private doctors if they use vouchers. Further study is needed to examine the effects of voucher on this aspect of the reforms.”

Comment 6:
6. Are limitations of the work clearly stated?
The work on the empirical data proceeds in a professional and cautious way, but the limitations that I would find important, are in the general setting.

Response 6:
Thanks. We would agree that we were constrained by the context of the policy changes – i.e. that they were introduced very quickly for political expediency and we needed to do the study in real time as we were assessing the policy impact of something the government had already done. Of course our other major constraint in Hong Kong is that we needed to use convenience sampling of older people since we do not have a population register from which we could randomly sample older people.

Comment 7:
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
The authors may refer to vouchers or voucher systems that are not necessarily similar to the system in place in Hong Kong. I have not had a change to go through the whole field of relevant the literature. However, the first notion of a voucher would be that the voucher covers the total cost or the total cost deducted with a normal user fee or deductible. The voucher system in Hong Kong in this case, channels a relatively small subsidy. Such a subsidy may easily lead into the subsidy funds raising the actual charges, if not managed and monitored properly. At least, I would expect that the authors should acknowledge this aspect and difference in what kinds of vouchers are used.

Response 7:
Thank you for this comment. Again, we were constrained by what we have suggested to government was a non evidence based approach – but one they had adopted. We agree with the potential for increasing prices and have examined that in our work (no strong evidence suggesting this has systematically happened yet).

To address your comments, we have firstly enriched the introduction by adding more voucher experiences in other countries.

(P.5-6: The 3-4th paragraph in Introduction)
“…Vouchers are commonly used in health and education services aiming at encouraging the use of under-consumed services, targeting beneficiaries, and increasing client satisfaction [14-16]. Different countries and continents have different reasons for introducing vouchers. As for the purpose of reducing some of the demand-side barriers to
access (particularly costs), China Yunnan, Taiwan and Bangladesh had implemented maternal health voucher for the poor women to access quality maternal health services [14, 17, 18]. There were also schooling voucher for the poor girls in Pakistan and Bangladesh to encourage school enrolment [14]. In boosting demand for under-utilized services, Nicaragua had a sexually transmitted infections voucher scheme aiming at boosting the intake of treatment and prevention services for high risk groups such as commercial sex workers and their partners and clients [19]. France also had immunization voucher for asthmatic children in stimulating the low influenza vaccination coverage [20]. To promote abstinence from cigarette smoking, United States Baltimore had goods/services vouchers as incentive for ex-smokers to remain drugs-free [14].

As for the impact of different voucher programs, the evidence has been mixed. However, in general, the results of voucher schemes in specific health preventive services e.g. sexual and reproductive health services, child and maternal services, mammography screening, vaccination uptake, and medication compliance programs has been positive, especially in encouraging people to perform clearly defined, time-limited, simple behavioural tasks [20-27]. However, the objectives, deliverables and efficacy of a voucher system are contingent on how a supplementary financing option, such as voluntary private health insurance or medical savings account system, is structured [28]. Despite different reasons for setting up a voucher program, how successful it is depends on some common factors, including the target groups, mechanism of vouchers, and the current functioning of health and education sector [14, 15]."

Secondly, there might be a chance that the consultation charges will be higher due to the subsidy provided, if not managed and monitored properly. In our study, we have a question asking whether the older people perceived that the consultation fees in general had increased subsequent to the launch of the voucher scheme. Nearly half (45%) did not feel that there was an increase in consultation fees, while a 14% perceived an increase, and the rest (42%) saying that they did not know whether the scheme had led to an increase in consultation fee. This finding is from the patients perspectives. Further study is needed among the supply side to ascertain the range of co-payment charged by healthcare service professionals and whether the fees are beyond the willingness to pay of the older people. A paragraph on the above findings is put in Discussion as follows:

(P17: The 5th paragraph in Discussion)
Proper management and monitoring of voucher schemes is also necessary to ensure the actual consultation charges would not be increased by the voucher scheme. In our study, nearly half (44.8%) of the older people did not feel that there had been an increase in consultation fees subsequent to the launch of the voucher scheme, while 13.7% perceived an increase, and the rest (41.7%) said that they did not know. Further study is needed among the supply side to ascertain the range of co-payment charged by healthcare service professionals and whether the fees are beyond the willingness-to-pay of the older people.

Comment 8:
8. Do the title and abstract accurately convey what has been found?
The same general problem that I have been pointing here is present also in the
abstract.

Response 8:
We have revised the title as “Can vouchers make a difference to the use of private primary care services by older people? Experience from the healthcare reform programme in Hong Kong”

The background part of the abstract has been revised accordingly.

“As part of its ongoing healthcare reform, the Hong Kong Government introduced a voucher scheme, intended for encouraging older patients to use primary healthcare services in the private sector, thereby, reducing burden on the overwhelmed public sector. The voucher program is also considered one of the strategies to further develop the public private partnership in healthcare, a policy direction of high political priority as indicated in the Chief Executive Policy Address in 2008-09. This study assessed whether the voucher scheme, as implemented so far, has reached its intended goals, and how it might be further improved in the context of public-private partnership.”

Comment 9:
9. Is the writing acceptable?
As a minimum requirement, I would expect the authors to include both background information and also essential elements into the discussion of the points that are addressed in my comments to question #5.

Response 9:
We have revised and enriched the background and discussion as suggested (see our response 5 above).
Reviewer: Timo Seppälä

Reviewer's report:
Major Compulsory Revisions

Comment 1:
1) Background is too shallow. The vouchers in general are not described and connected together with existing literature adequately in the introduction. E.g. describing different reason to establish voucher schemas would make a great improvement, namely, there are different reasons in different countries and continents to establish vouchers.

Response 1:
Thanks for pointing this out. We realize the background was rather limited, especially for readers who don’t have prior knowledge about the system in Hong Kong. This is an ad hoc study on a voucher program after its implementation; therefore, all the design features were already established before our engagement.

Nevertheless, we have re-structured and enriched the introduction by firstly describing the healthcare reform in Hong Kong (outlining the current structure of health services used in Hong Kong), and then followed by the description of voucher scheme which is then linked to the literature review of other voucher programs in other countries, and laying the foundation of our motivation and objectives of the study. Please refer to the revised text for the enriched Introduction session.

Comment 2:
2) Better motivation for the study is needed and can be done by revising the introduction to expose the meaning and reasoning of the study right in the beginning of the background section. Now, the motivation and what the study is about is the last paragraph of the background section.

Response 2:
The voucher scheme was envisioned as a pilot study that fits into two priority areas on the Hong Kong Government’s agenda - primary care and public-private partnership. It was an example of politically motivated rather than evidence-based policy-making since there is no study/ thorough research on the subsidy amount, the impact of voucher scheme on both users and providers etc. before launching. The lack of evidence in the policy was indeed the main motivation behind our current ad hoc study to examine whether this new policy would affect the older people’s health seeking behaviour. We have added a paragraph on “Motivation and Study Objectives” at the end of the Introduction.

(P.7-8: Last paragraph of Introduction)

*Motivation and Study Objectives
Our study was, of necessity given the political context and sudden policy announcement,
carried out as the voucher scheme was introduced. The voucher scheme was deemed to fit well into two priority areas on the Hong Kong Government’s agenda - primary care and public-private partnership and was introduced in the Chief Executive’s policy address. We are not aware of studies done a priori to estimate the appropriate subsidy amount, or simulate the program’s potential impact before its launch. The lack of evidence was indeed the main motivation behind our current ‘real-time’ study. Our interest, as well as that of government who funded us, was whether this new policy - the introduction of a voucher scheme (as implemented) - had affected the older population’s health seeking behaviours and shifted them toward the Government’s desired healthcare reform direction of greater use of primary healthcare services in the private sector. More specifically, our main objective of the study was to assess whether the voucher program so far has realized its intended goals, and to provide lessons learned (i.e. the missing evidence before launching the program) for future program improvement and policy changes.”

Comment 3:
3) The mechanism of the vouchers, why they should be effective, how those affect the behavior and what challenges those make for demand and supply side should be at least shortly discussed.

Response 3:
We have re-structured and enriched the Introduction part by bringing up the introduction of voucher scheme including its mechanism which is then linked to the literature review covering other voucher schemes in different countries and their impact including how the voucher programs affect behaviour. Please refer to the Introduction part for details.

Our study is gathering information from the target recipients (older people) on their behaviour change following the introduction of voucher scheme, and the results showed that the voucher scheme failed to induce any noticeable behavioural change on these groups of primary healthcare services users (i.e. older people) during the first year of pilot period. This study focuses on the demand side of the healthcare system, i.e. the patients/consumers. However, to fully understand the issue, a supply-side study is required and may be beyond the scope of this paper. Currently, available data on private providers are quite limited. The lack of regulation on and data collection from the private healthcare professionals in Hong Kong pose tremendous challenges for such analysis.

Suggestions on how to improve the voucher scheme in both the demand and supply sides (in response to the barriers/ challenges they faced) are given in the 5th paragraph of Discussion.

(P.17: The 5th paragraph in Discussion)
“…the voucher scheme still has room for improvement to make it more effective. There appears to be a lack of interest in the voucher scheme from both supply and demand side. Greater publicity and more variety of media promotion and approaches would increase awareness and usage. Also, given only half of the registered private Western medicine doctors have enrolled in the voucher scheme [30], more healthcare professionals should
be encouraged to enroll in the scheme to provide more choices for the older people… Proper management and monitoring of voucher schemes is also necessary to ensure the actual consultation charges would not be increased by the voucher scheme… Further study is needed among the supply side to ascertain the range of co-payment charged by healthcare service professionals and whether the fees are beyond the willingness-to-pay of the older people. Reasons for the low participation rate of healthcare professionals should also be examined. Another aspect of the voucher scheme is its high transaction and administrative cost. Over-servicing might also occur because of the direct link between outputs and subsidies. The above factors might affect the effectiveness of the voucher scheme. Thus, any improvements should consider a feasibility assessment covering client expectation, support or enrolment from services providers, administrative and transaction costs, and accurate determination of price to ensure the efficiency of the voucher scheme [14].”

Comment 4:
4) I’m not sure whether it is a misspelling or misunderstanding but generally there is a difference between provider and producer, in the text those are used as synonyms which is partially confusing. If the system is tax-based I guess the provider of the services is the state while the producer is private or public health center.

Response 4:
To avoid confusion, we now use “healthcare professionals” throughout the text, to refer to those who provide primary healthcare services to voucher holders in the private sector.

Comment 5:
5) All monetary values should be expressed in Dollars or Euros to make comparisons easier and facilitate international dimension of the article. Also, it should be exposed directly in the beginning what is approximate income level of Chinese relevant to the study. By this, the magnitude of the voucher program would be clearer to the reader.

Response 5:
Sorry about the confusion. We have expressed all monetary values in Dollars to make comparisons easier.

We have also added the income level in the paragraph which described the voucher scheme. The approximate consultation fees in both public and private clinic are also given.

(P.6-7: The 5th paragraph in Introduction)
“…the program provides older people aged 70 or above (with around US$1,426 household income on average) five US$6 healthcare vouchers annually (US$30 total) to partially subsidize their use of private primary care services. Private doctors in Hong Kong charge different prices (around US$19-26 per consultation compared to a consultation fee of US$6 in a public outpatient clinic) for mainly curative care on an episodic basis.”
Comment 6:
6) On page 6, important objective of the study has been exposed; evaluation of vouchers’ potential impact on primary health care system. However, the study does not really respond currently to this objective. I would suggest putting a lot effort on correcting and improving this part of the study as it constitutes a very important and interesting part.

Response 6:
Thanks for your suggestion. As mentioned at our responses 1 & 2, the voucher scheme was envisioned as a pilot study that fits into two priority areas on the Hong Kong Government’s agenda - primary care and public-private partnership. It was an example of politically motivated rather than evidence-based policy-making since there is no study/thorough research on the subsidy amount, the impact of voucher scheme on both users and providers etc. before launching. The lack of evidence in the policy was indeed the main motivation behind our current ad hoc study to examine whether this new policy would affect the older people’s health seeking behaviour.

We have re-structured and enriched the introduction by firstly describing the healthcare reform in Hong Kong (outlining the current structure of health services used in Hong Kong), and then followed by the description of voucher scheme which is then linked to the literature review of other voucher programs in other countries, and laying the foundation of our motivation and objectives of the study. Please refer to the revised text for the enriched Introduction session.

Comment 7:
7) The reasoning behind selection of the groups for the survey is not clear and needs to be clarified to make a point for selecting two different groups.

Response 7:
Since there is no population register from which we could randomly sample older people in Hong Kong, we used a convenience sampling from two different groups of people – generally well and relatively sick people. Sourcing from these two groups could help to provide a more representative sample for our analysis. We have confirmed through comparison with Census data that the age and gender profile of our sample was similar to those of the general population, which indicated that our sample is representative. We have also highlighted this in the limitation of the study.

(P.8: The 1st paragraph in Methods)
“Since there is no population register from which we could randomly sample older people in Hong Kong, we used a convenience sampling to recruit two groups of older people: (i) older people who were sick and were attending outpatient clinics in either public or private sectors, and (ii) older people who were generally well at the time of enumeration surveyed either in the parks while doing morning exercise or in the elderly health centres during their physical check up.”
Comment 8 & 9:
8) The tested and tools to test difference between perceived and actual behavior is not absolutely clear. Why some people would say that he or she doesn’t think there has been a change in his or her behavior but then actually there has been a change?

9) It is not clear what was actually tested in statistical analyses. Were the tests within perceived/actual behavior for different groups or between perceived and actual behavior? Unfortunately, not even the tables do clarify the matter, and in fact, also those need to be described better.

Responses 8 & 9:
Sorry about the confusion. We are not testing the difference between perceived and actual behaviour change. We are studying two outcomes: (i) perceived change of old people’s health seeking behaviour, (ii) use of vouchers - whether old people have ever used the vouchers. Older people might use the vouchers, but do not perceive a change in their health seeking behaviour since some of them might have already been using the private sector before introduction of the voucher, or others might just want to make good use of the subsidy for a one-time visit, and after using all the vouchers, they might follow back their usual health seeking pattern. Our study have found that among those older people who had used the vouchers, 36.3% said the triggers for using vouchers was to make good use of the subsidy.

The tests used in the study were within perceived behaviour, and the use of vouchers for different groups.

We have revised the methodology part to make it clear.

(P.9-10: The 3-4th paragraph in Methods)

“Outcome measures
The primary outcome of the study was the changes in perceived health seeking behaviour - measured by asking the older people if they thought there had been a change in their health seeking behaviour when they sought advice from healthcare professionals after the introduction of the voucher scheme. We also assessed who were the users of voucher scheme - measured by asking whether the older people had ever used vouchers to see private primary care professionals (which signals actual behaviour change especially for those who are used to seeing public doctors).

Statistical analysis
Descriptive statistics were collected on the awareness, attitudes and usage of voucher scheme. Univariate analysis of (i) perceived changes in health seeking behaviour and (ii) use of vouchers was undertaken. The variables that were significant in the univariate analysis were tested by logistic regressions to identify predictors of perceived behaviour
change and factors associated with the use of vouchers and to estimate adjusted odds ratio (OR) with 95% confidence intervals (CI).”

Comment 10:
10) Selection of controls and explanatory variables is unclear. Why e.g. schooling appears in analyses as an explanatory variable and not as a control? The same question applies to all selected variables. Hence, some solid reasoning is needed to support the made choices.

Response 10:
Sorry about the confusion. We have revised the logistic regression by putting those significant explanatory variables in the univariate analysis into the regression. The variables age, gender, and living districts (although not significant in the univariate analysis) are also put into the regression since they are expected to affect people’s behaviours and be used as adjusting factor. We have further clarified the selection of these explanatory variables in the revision.

(P.9-10: The 4th paragraph in Methods)

“Statistical analysis

Descriptive statistics were collected on the awareness, attitudes and usage of voucher scheme. Univariate analysis of (i) perceived changes in health seeking behaviour and (ii) use of vouchers was undertaken. The variables that were significant in the univariate analysis were tested by logistic regressions to identify predictors of perceived behaviour change and factors associated with the use of vouchers and to estimate adjusted odds ratio (OR) with 95% confidence intervals (CI).”

Comment 11:
11) Study question is exposed in a way that supports quantitative analysis, however, the analysis and reasoning for the results in merely based on qualitative analysis. It should be made clear for the reader that the level of analyses will be qualitative and some light quantitative methods will be used to trace possible factors behind qualitative findings.

Response 11:
Although the main content of our questionnaire survey was on people’s knowledge and attitude (mostly qualitative measures), this study is based on quantitative statistical analysis of responses from the survey, e.g. how many older people perceived a change in their behaviour, who were the users of voucher scheme etc. Qualitative responses, such as reasons for not changing behaviours were also assessed to study older people’s behaviour. Further focus group or in-depth interviews are required to study the reason behind for not changing behaviour.

Comment 12:
12) The dependent variables are not well exposed.
Response 12:
Sorry about the poor presentation. We have revised the methodology part (see responses 8 & 9) to make the presentation better.

Comment 13:
13) The reader is craving for the main finding. What is novel or surprising solid finding and contribution of the study?

Response 13:
This study provided important insight on whether a voucher scheme (covering both curative and preventive care) could induce behavioural change on the older people in the primary healthcare system. Although the design and implementation of the scheme was within the particular context of Hong Kong’s current health system, it does have some implication and lessons learned for other countries, especially those going through similar healthcare reforms (especially promoting primary care) as in Hong Kong. There is little evidence worldwide on whether the voucher scheme could incentivize the use of primary care services in the private sector. Despite the evidence provided in the international studies which showed a positive effect of voucher scheme on encouraging behaviour changes in specific health services in particular the uptake of preventive measures, our study showed that the voucher scheme in Hong Kong has so far failed to induce noticeable behavioural change on the older people. Older people tend to follow their usual health seeking behaviour despite the availability of healthcare vouchers. The results indicated that the inertia of the older people already seeking care in the public sector, low level of subsidy provided, low participation of healthcare professionals, and the relatively lower priority given to preventive care are main factors impeding the desired changes.

Comment 14:
14) Why one should use a voucher when he or she is not in need of services?

Response 14:
We have asked the older people the triggers for using the vouchers. The major trigger for the use of the vouchers was to make good use of subsidy by the Government. Indeed, a quarter of the older people quoted “They don’t have to consult healthcare professionals” as the reasons for not using vouchers.

Comment 15:
15) Inferences in the discussion section are not obvious from the analyses, and thus analyses should be explained more and subtle.

Response 15:
We have revised and enriched the analysis and discussion part by giving the evidence shown in the analysis first, and then followed by our observation and the implications to make the flow clearer, for example:
“...Older people who are used to seeking care from private doctors are more ready and prepared than those relying on the public healthcare system to make use of healthcare vouchers. Those older people who were used to seeing public doctors were less likely to use the vouchers (23.6%) compared to those used to seeing private doctors only (49.0%) or a mix of public and private doctors (41.6%).”

“...since the current usage of vouchers is low and the older people mainly use them for acute conditions, attempts to encourage use of private services for maintenance or control of their chronic diseases needs review, as does potential use of vouchers for promoting other evidence-based programmes such as care supported by guidelines. The small proportion (7.0%) of health care vouchers used on preventive services indicated that most older people give preventive services a low priority when it comes to healthcare spending decisions...”

“...In addition, the level of subsidy should be reviewed since nearly 68.0% said the subsidy was not enough. Proper management and monitoring of voucher schemes is also necessary to ensure the actual consultation charges would not be increased by the voucher scheme. In our study, nearly half (44.8%) of the older people did not feel that there had been an increase in consultation fees subsequent to the launch of the voucher scheme...”

Comment 16:
16) In the discussion part, cost-effectiveness and incentives are discussed but the study is lacking of the analyses supporting the discussion, and hence needs to be revised to correct the point. Why voucher-based system would be more cost-effective? Why it should have incentivizing elements? These questions need to be addressed with solid answers before entering the discussion.

Response 16:
Sorry about the confusion. Cost-effectiveness and incentives are concepts we tried to introduce in the context of improving the voucher program in the future, therefore, they are only discussed in the discussion section. Our study does not provide direct evidence on whether the voucher scheme is cost-effective or not. Our main message is that, as one type of incentives for encouraging more use of private primary care services, voucher scheme in Hong Kong is not working well for the older people due to their inertia in seeking care in public sector; therefore, the Government might want to consider introducing other more cost-effective incentives by targeting other subpopulations or specific services. We have revised the sentence as follows:

“...Presentation to policymakers has suggested that they might wish to consider introducing more cost-effective incentives by targeting other subpopulations or specific services.”
Comment 17:
17) Reporting subsidy level too low should not lead to inference about inability to pay since the reason can be also low willingness to pay, or biased answer for which there is vast behavioural economics literature. To make the inference, deeper analysis needs to be conducted.

Response 17:
We agree, indeed, we have a separate study that looks at people’s willingness to pay. To clarify, the text has been revised as follows:

(P.15: The 3rd paragraph in Discussion)
“The main reasons given were that they did not wish to change their usual practice of seeing public doctors and that the subsidy amount is relatively low. This not only indicated that the older people are content with services currently received in the public sector, despite long waits and crowded conditions, but in a large part this might reflect their low willingness to pay, perceived inability to pay and uncertainty about the price and quality of services provided in the private sector. A separate study was being conducted among the older groups on their willingness to pay for private sectors.”

Comment 18:
18) Matters about representativeness should be exposed right in the beginning of data description and not at the end of the discussion section.

Response 18:
We have revised and pointed out the data representativeness in the beginning of the methodology part. It was further discussed in the limitation part at the end of the discussion section.

Comment 19:
Minor Essential Revisions
19) It is not standard way to start statistical analysis by exposing the primary outcome of the study. I suppose this part is rather due to the language but needs concentration to make it sound.

Response 19:
We have removed the primary outcome in the statistical analysis session and put it in a new subheading “Outcome measures” in the methodology part (see responses 8 & 9).

Comment 20:
20) The table for descriptive statistics would be easier to read than percentages in the text. There is no need to expose the descriptive statistics in the text when there is a good and clear table but concentration in text should be on remarkable differences or findings from the descriptive statistics. When there’s none then it is enough to show the table.
Response 20:
We have revised and highlighted those important parts in the text, and removed those less remarkable one, say, healthcare services utilization pattern, etc.

Comment 21:
21) Multiple logistic regression should probably be multivariate logistic regression.

Response 21:
It is simply revised as logistic regression.

Comment 22:
22) What would be a mechanism to make private prices more comparable with public ones?

Response 22:
First of all, the government needs to systematically collect the pricing information from the private sector, making it publicly available, for consumers to compare. This mechanism itself may help introducing more competition and bringing down the price in the private sector in general. In addition, apart from the demand-side subsidy e.g. vouchers, supply side subsidy e.g. cash subsidy (including lump-sum payments and block contracts to provide a set of services, tax rebates, etc.) or in-kind subsidy could be used.

Comment 23:
Discretionary Revisions
23) It might be useful to use literature also from non-healthcare sector when comparing the effects of voucher based systems. E.g. from schooling or other sectors there exists vast literature on vouchers.

Response 23:
Thank you for your suggestion. We have added a few references from the education sector. The literature suggested that the impact of voucher schemes in health and education services is mixed.

Comment 24:
24) To get more insight how the vouchers might and might not affect behavior authors should use vast literature from behavioural economics.

Response 24:
The focus of our study is not to examine in details how people come to behave (in seeking health care) as they do and what would change such behavior. Our main motivation is that, a policy change was made (i.e. the introduction of voucher scheme), and we wanted to know whether this policy change has reached its intended goals and how it might be further improved in the future. And to answer these questions, we conducted a survey on the target population to obtain information on their experience so far.
Comment 25:
25) To get a lot insight to the results one should explore private producer sector more deeply. What are the reasons behind possible inactivity of producer sector?

Response 25:
We agree. This study focuses on the demand side of the healthcare system, i.e. the patients/consumers. However, to fully understand the issue, a supply-side study is required and may be beyond the scope of this paper. Currently, available data on private providers are quite limited. Government statistics showed that there is a relatively low participation rate of the healthcare professionals joining the voucher scheme. Further study, perhaps including focus group of private producers should be conducted to examine reason behind of the inactivity of producer sector.