PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Effects of active referral combined with a small financial incentive on smoking cessation: study protocol for a cluster-randomized controlled trial
AUTHORS	Weng, Xue; Wang, Man Ping; LI, Ho Cheung William; Cheung, Yee Tak Derek; Lau, Ching Yin; Kwong, Antonio Cho Shing; Lai, Vienna; Chan, Sophia; Lam, Tai Hing

VERSION 1 – REVIEW

REVIEWER	Timothy B. Baker University of Wisconsin Department of Medicine USA
REVIEW RETURNED	16-Mar-2020

GENERAL COMMENTS	BMJ MS (Effect of active referral combined with a small financial incentive on smoking cessation: study protocol for a cluster-randomized controlled trial: Journal: BMJ Open:Manuscript ID bmjopen-2020-038351) -Readers may want to see references to other/prior work along these lines; that is, use of incentives to spur smoking treatment use. These don't change the proposed research but provide more context: Anderson et al., Am JPrevMed2018;55(6S2):S138−S147 Baker et al., J Consult Clin Psychol. 2018:86(5)464-473 Fraser et al., Am J Prev Med. 2017;53(6):754-763 Tong et al., Am JPrevMed2018;55(6S2):S159−S169 --Abstract: "accessor-blinded"? Should it be "assessor-blinded"? These may encourage the authors to change their statement on p.2 that "This is the first trial to examine the effectiveness of active referral plus financial incentives to increase the use of smoking cessation service in promoting abstinence in the community." To some extent the references above involved at least some broad community samples (even if low income smokers were targeted). --Also, they later report that financial incentives in some studies did not increase treatment use and abstinence. The studies cited above generally showed both. --It would be good for the authors to explain how they recognized smokers—only by directly observing them smoke? --For purposes of dissemination it would be good to know how 'advisors' are recruited. Also, it is implied that they are not paid but this is should be clarified. --The authors should make clear at what the point a person is considered enrolled for as per application of the intent-to-treat principle. Also, more explanation of the use of the 70% retention adjustment to power estimates should be explained in this context.

	--It would be valuable for the authors to provide information on the methods they use to increase contact rates for biochemical verification of abstinence. The protocol will be of some interest to researchers who want to further explore the effects of incentives for treatment engagement.

REVIEWER	Caitlin Notley University of East Anglia
REVIEW RETURNED	24-Apr-2020

GENERAL COMMENTS	Overall this is a well-designed protocol for an RCT. The novelty of the approach needs clarifying and caveating, as I feel that the novelty is overstated and perhaps more context dependent. It would also be helpful if the authors could clarify how the analysis of data form this trial will fit with other linked trials and how the issue of contamination between the trials might be addressed. I have other more minor comments that are detailed below: Abstract: Methods – do the authors mean 'assessor blinded' rather than 'accessor'? The incentive is 'for encouraging to use any of the smoking cessation services within 3 months'. Does this mean the incentive is for attendance at service, completion of a visit, or a CO verified outcome? Is the primary outcome continuous biochemically validated abstinence or point prevalence? Strengths and limitations: I don't think it is true that 'This is the first trial to examine the effectiveness of active referral plus financial incentives to increase the use of smoking cessation service in promoting abstinence in the community'. The recent Cochrane review (2019) of financial incentives for smoking cessation includes many trials of incentives, both for verified abstinence and to promote engagement with treatment. This review is referred to in the discussion. Rather than 'undetermined' do the authors mean 'unmotivated'? Introduction: Please report confidence intervals as well as P levels when reporting findings from previous studies that inform the background to this protocol. Please refer to the latest evidence review when reviewing previous evidence for financial incentives, not just your own work. The Cochrane incentives review if the most robust source of recent polled trial data that should be referred to. The outcome is confused between cessation outcomes and motivation to use the service – these are different outcomes and should be delineated. Overall the narrative style of the introduction and discussion sections needs careful checking for English language errors. Recruitment: Eligibility criteria suggests that participants need to be motivated to quit smoking, which contradicts the point given in the strengths and limitations section Interventions: The intervention group receive both an 'enhanced' referral support package and the financial incentive. How will analysis be able to demonstrate which aspect of the intervention is having an effect? Procedures: A qualitative sub-study is mentioned but no detail is given for this – sampling approach,and data collection?

	Outcomes – is the 6 month primary outcome form treatment initiation or from randomisation? Analysis: I am not a statistician and so may not understand, but it seems to be that missing data will not be random. We might expect far more missing data from those who have not managed to quit smoking. How will this be managed via imputation? Usually one should be cautious about too many pre-planned sub-group analyses. As intervention adherence will be assessed will there be a per protocol analysis as well as ITT? It is good that a qualitative process evaluation is planned but more detail is needed as to the aims and objectives of the process evaluation. Discussion I am not convinced of the novelty of this trial in providing incentives to promote service engagement, as other trials have taken this approach. Perhaps the novelty is in application in this country/context? This needs clarifying. The authors correctly acknowledge as a limitation that analysis will not be able to establish the relative effect of the enhanced referral model against the incentive within the intervention.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1's comments

C1. Readers may want to see references to other/prior work along these lines; that is, use of incentives to spur smoking treatment use. These don't change the proposed research but provide more context:
Anderson et al., Am JPrevMed2018;55(6S2):S138−S147

Baker et al., J Consult Clin Psychol. 2018:86(5)464-473

Fraser et al., Am J Prev Med. 2017;53(6):754-763

Tong et al., Am JPrevMed2018;55(6S2):S159−S169

R1. Thank you very much for your comments and suggestions. We have now added the above references (p.3) as followed: *"Financial incentives increased service enrolment [13] and use of tobacco dependence treatment (medications, nicotine replacement therapies, and counselling) [14-17], and service providers have offered them effective treatments to increase abstinence [12]."*

C2. Abstract: "accessor-blinded"? Should it be "assessor-blinded"?

R2. Thanks and we have revised the typo.

C3. These may encourage the authors to change their statement on p.2 that "This is the first trial to examine the effectiveness of active referral plus financial incentives to increase the use of smoking cessation service in promoting abstinence in the community." To some extent the references above involved at least some broad community samples (even if low income smokers were targeted). Also, they later report that financial incentives in some studies did not increase treatment use and

abstinence. The studies cited above generally showed both.

R3. We agreed with the reviewer's comments. We have revised the relevant part (p.8) as followed: *"This trial uses active referral plus a financial incentive as a model to increase smoking cessation attendance and abstinence in the community."*

C4. It would be good for the authors to explain how they recognized smokers—only by directly observing them smoke?

R4. In Hong Kong, where smoking is banned in indoor public areas and workplace, smokers often gather and smoke at outdoor smoking hotspots, such as the exits of railway stations, entrances of commercial buildings and shopping malls. Our previous research has shown that recruiting smokers and delivering brief cessation advice at smoking hotspots are feasible and likely effective to approach large numbers of community smokers [1, 2]. We have added details (p.4) as followed: *"Using the "foot-in-the-door" approach [25], trained smoking cessation advisors proactively approach smokers at smoking hotspots in the vicinity of the recruitment booths…".*

References

1. Chan SSC, Cheung YTD, Wan Z, Wang MP, Lam TH. Proactive and brief smoking cessation intervention for smokers at outdoor smoking "hotspots" in Hong Kong. *J Cancer Educ*. 2018;33(2):365-70.

2. Cheung YTD, Lam TH, Li WHC, Wang MP, Chan SSC. Feasibility, efficacy, and cost analysis of promoting smoking cessation at outdoor smoking "hotspots": a pre-post study. *Nicotine Tob Res*. 2017;20(12):1519-24.

C5. For purposes of dissemination it would be good to know how 'advisors' are recruited. Also, it is implied that they are not paid but this is should be clarified.

R5. Thanks for the comments. Bulk emails to university students and posters at campus are used to recruit smoking cessation advisors. University students are paid as part-time helpers with a salary of 66HKD per hour. We have added details (p.5) as followed: *"Smoking cessation advisors are recruited through university mass emails and advertising posters. They include university students (with an hourly rate of HK$66 ≈ US$8.5) and volunteers of non-governmental organizations."*

C6. The authors should make clear at what the point a person is considered enrolled for as per application of the intent-to-treat principle. Also, more explanation of the use of the 70% retention adjustment to power estimates should be explained in this context.

R6. Intention-to-treat principle is applied to participants once they consent and randomly allocate to treatment; participants are analyzed in the groups to which they are randomized The estimation of the retention rate at 6 months is based on our previous trials conducted in 2015 (73.8%) [3] and in 2016 (72.9%) [4]. The references are added (p.5) as followed: *"Assuming an intra-cluster correlation coefficient of 0.015 [22] with an average cluster size of 18 and a retention rate of 70% at 6-month follow-up [9, 26]…".*

References

3. Wang MP, Suen YN, Li WH, Lam OB, Wu Y, Kwong AC, et al. Intervention with brief cessation advice plus active referral for proactively recruited community smokers: a pragmatic cluster randomized clinical trial. *JAMA Intern Med*. 2017;177(12):1790-7.

4. Weng X, Luk TT, Suen YN, Wu Y, Li HCW, Cheung YTD, et al. Effects of simple active referrals of different intensities on smoking abstinence and smoking cessation services attendance: a cluster-randomized clinical trial. *Addiction*. 2020.

C7. It would be valuable for the authors to provide information on the methods they use to increase contact rates for biochemical verification of abstinence.

R7. Multiple strategies are used to increase participation of the biochemical validation. Trained research assistants make validation appointment with self-reported abstinent based on their convenient time and location. For no-show participants, one more validation appointment will be made. To increase the participation rate, participants in both groups will receive a small cash incentive (HK$500 ≈ US$64) for passing the validation test, which has been found to have no effect on abstinence in our previous trial [5]. More details on validation have now been added (p.6) as followed: *"Participants who self-report abstinence for more than 7 days at 3 and 6 months are invited for a biochemical validation. Exhaled carbon monoxide samples are collected by research staff with a piCO™ Smokerlyzer® (Bedfont Scientific Ltd), and saliva cotinine samples are measured using a NicAlert® test strip (Nymos Pharmaceutical Corporation). To increase participation, participants receive a cash incentive of HK$500 (≈ US$64) for passing the biochemical validation."*

Reference:

5. Cheung YTD, Wang MP, Li HCW, Kwong A, Lai V, Chan SSC, et al. Effectiveness of a small cash incentive on abstinence and use of cessation aids for adult smokers: a randomized controlled trial. *Addict Behav*. 2017;66:17-25.

C8. The protocol will be of some interest to researchers who want to further explore the effects of incentives for treatment engagement.

R8. Thanks for the comments.

Reviewer 2's comments

C9. Overall this is a well-designed protocol for an RCT. The novelty of the approach needs clarifying and caveating, as I feel that the novelty is overstated and perhaps more context dependent. It would also be helpful if the authors could clarify how the analysis of data form this trial will fit with other linked trials and how the issue of contamination between the trials might be addressed. I have other more minor comments that are detailed below:

R9. We appreciate the reviewer's comments regarding our manuscript. We agree with the reviewer's comment that our work could be improved by addressing the mentioned problems. Please see details below.

Abstract:

C10. Methods – do the authors mean 'assessor blinded' rather than 'accessor'?

R10. Thanks and we have revised the typo as suggested.

C11. The incentive is 'for encouraging to use any of the smoking cessation services within 3 months'. Does this mean the incentive is for attendance at service, completion of a visit, or a CO verified outcome?

R11. The incentive is contingent upon smoking cessation service use, not abstinence. We have now revised the content as followed: *"Additionally, participants in the intervention group receive an offer of referral to smoking cessation services at baseline and a small financial incentive (HK$300 ≈ US$38) contingent upon using any of such services within 3 months."*

C12. Is the primary outcome continuous biochemically validated abstinence or point prevalence?

R12. We use 7-day point-prevalent of self-reported and validated abstinence in the trial. We have added explanations of biochemical validation (p.6) as followed: *"Participants who self-report abstinence for more than 7 days at 3 and 6 months are invited for a biochemical validation. Exhaled carbon monoxide samples are collected by research staff with a piCO™ Smokerlyzer® (Bedfont Scientific Ltd), and saliva cotinine samples are measured using a NicAlert® test strip (Nymos Pharmaceutical Corporation). To increase participation, participants receive a cash incentive of HK$500 (≈ US$64) for passing the biochemical validation."*

Strengths and limitations:

C13. I don't think it is true that 'This is the first trial to examine the effectiveness of active referral plus financial incentives to increase the use of smoking cessation service in promoting abstinence in the community'. The recent Cochrane review (2019) of financial incentives for smoking cessation includes many trials of incentives, both for verified abstinence and to promote engagement with treatment. This review is referred to in the discussion.

R13. Thanks for the comments. We have revised the relevant part as followed: *"This trial examines the effectiveness of active referral combined with a financial incentive to increase the use of smoking cessation services in promoting abstinence in the community."*

C14. Rather than 'undetermined' do the authors mean 'unmotivated'?

R14. Thanks for the question. Participants of the "Quit to Win" campaign have motivation to quit or reduce to smoking (as prespecified in the eligibility criteria). Our previous trials [3, 4, 6] have shown that most of them have no intention to quit in the short term (i.e., within 60 days). We have revised it as followed: *"A proactive approach is used to recruit smokers from a broader, community-based population, who are mostly undetermined to quit in the short term."*

References:

3. Wang MP, Suen YN, Li WH, Lam OB, Wu Y, Kwong AC, et al. Intervention with brief cessation advice plus active referral for proactively recruited community smokers: a pragmatic cluster randomized clinical trial. *JAMA Intern Med*. 2017;177(12):1790-7.

4. Weng X, Luk TT, Suen YN, Wu Y, Li HCW, Cheung YTD, et al. Effects of simple active referrals of different intensities on smoking abstinence and smoking cessation services attendance: a cluster-randomized clinical trial. *Addiction*. 2020.

6. Wang MP, Luk TT, Wu Y, Li WH, Cheung DY, Kwong AC, et al. Chat-based instant messaging support integrated with brief interventions for smoking cessation: a community-based, pragmatic, cluster-randomised controlled trial. *The Lancet Digital Health*. 2019;1(4):e183-e92.

Introduction:

C15. Please report confidence intervals as well as P levels when reporting findings from previous studies that inform the background to this protocol.

R15. As suggested, we have added odd ratio and confidence intervals (p.3) as followed: *"Call-back referral (CBR), which assists smokers to book their preferred service provider by calling them back to arrange an appointment for smoking cessation treatment, showed a significantly higher bio-verified abstinence at 6 months than did a control condition in which participants received advice according to the AWARD (Ask, Warn, Advise, Refer, Do-it-again) model (9.0% vs. 5.0%; odds ratio (OR) = 1.85, 95% confidence interval (CI) = 1.06-3.23, P = 0.04) [9]."* and *"The two modified approaches showed significantly higher bio-verified abstinence at 6 months than AWARD-model-guided advice (7.6% and 7.8%, vs. 3.9%; OR for OSR vs. control = 2.02, 95% CI = 1.07-3.81; OR for TMR vs. control = 2.07, 95% CI = 1.10-3.92; both P < 0.050) [10]."*

C16. Please refer to the latest evidence review when reviewing previous evidence for financial incentives, not just your own work. The Cochrane incentives review if the most robust source of recent polled trial data that should be referred to.

R16. Thanks for the suggestion. As also suggested by reviewer 1 (see C4), we have added more research on financial incentive on treatment engagement (p.3) as followed: *"Financial incentives increased service enrolment [13] and use of tobacco dependence treatment (medications, nicotine replacement therapies, and counselling) [14-17], and service providers have offered them effective treatments to increase abstinence [12]."*

C17. The outcome is confused between cessation outcomes and motivation to use the service – these are different outcomes and should be delineated.

R17. We thank you for your suggestion and have now separated delineated the outcomes (p.7) as followed:
"The primary outcomes are bio-verified abstinence at 3 months (end of treatment) and 6 months after treatment initiation confirmed by an exhaled carbon monoxide level< 4 ppm and salivary cotinine level < 10 ng/mL [27, 28].

Secondary outcomes include the following:
1. Self-reported 7-day point-prevalence abstinence;
2. Smoking reduction, defined by at least 50% reduction in daily cigarette consumption compared with that at baseline;
3. Cumulative use of smoking cessation service, defined by using at least one treatment session (e.g., face to face/ phone counseling, nicotine replacement therapy, acupuncture)."

C18. Overall the narrative style of the introduction and discussion sections needs careful checking for English language errors.

R18. Thanks for the comments. The revised version of the manuscript has now been edited by a professional English editor.

Recruitment:

C19. Eligibility criteria suggests that participants need to be motivated to quit smoking, which contradicts the point given in the strengths and limitations section

R19. As explained in R17, participates who are motivated to quit or reduce smoking join the contest, but most have not yet decided to quit within the 2 months as shown in our previous trials.

Interventions:

C20. The intervention group receive both an 'enhanced' referral support package and the financial incentive. How will analysis be able to demonstrate which aspect of the intervention is having an effect?

R20. The trial uses a pragmatic design that integrates different components to maximum the intervention effect. We dose not aim to examine the effectiveness of individual components of the intervention, all of which has been found effective in our prior trials. We did not find the benefit of stand-alone financial interventions on abstinence [5]. We addressed this point in the limitation (p.8) as followed: *"First, the trial is pragmatic and cannot completely disentangle the effect of each intervention component (brief advice, active referral, financial incentive). However, we are more interested in the combined effect of the multicomponent trial, which targets several barriers for maintaining abstinence. Future research comparing the effect of different levels of active referral (e.g., CBR plus incentive vs. CBR only) on abstinence is warranted."*

Reference:

5. Cheung YTD, Wang MP, Li HCW, Kwong A, Lai V, Chan SSC, et al. Effectiveness of a small cash incentive on abstinence and use of cessation aids for adult smokers: a randomized controlled trial. Addict Behav. 2017;66:17-25.

Procedures:

C21. A qualitative sub-study is mentioned but no detail is given for this – sampling approach, and data collection?

R21. Thanks for the suggestion. We have added more details on qualitative evaluation (p.7) as followed:
"Post-trial qualitative evaluation
Qualitative evaluations using a subsample of participants receiving the intervention will be conducted after the end of the study. The semi-structured interview aims to explore participants' experience of the intervention and adherence to it, and obtain study feedback. The sample size for the qualitative evaluation will be determined by data saturation. Participants will be sampled purposively based on sociodemographic characteristics, smoking status and intervention adherence. We anticipate that up to 20 participants will be included subject to data saturation. All interviews will be audio-recorded and transcribed verbatim. The transcripts will be organized using a thematic framework [30] based on topics specified in the interview guide and emerging themes identified through a process of familiarization with the transcripts."

C22. Outcomes – is the 6 month primary outcome form treatment initiation or from randomisation?

R22. Thanks for the question. The 6-month primary outcome form treatment initiation (p.6) as followed: *"The primary outcomes are bio-verified abstinence at 3 months (end of treatment) and 6 months after treatment initiation confirmed by an exhaled carbon monoxide level< 4 ppm and salivary cotinine level < 10 ng/mL [27, 28]."*

Analysis:

C23. I am not a statistician and so may not understand, but it seems to be that missing data will not be random. We might expect far more missing data from those who have not managed to quit smoking. How will this be managed via imputation?

R23. Thanks for the question. We assume missing at random (MAC) but not missing completely at

random (MCAR). MCAR refers the propensity for a data point to be missing is completely random. MAC means there are systematic differences between the missing and observed values, and these differences can be explained by other observed variables [7]. For instance, we assume smoking abstinence is MAC, conditional on intention to quit, then the distributions of missing and observed abstinence are similar among people of the same level of intention to quit. Missing abstinence outcome will be imputed based on the distribution of these variables (i.e., intention to quit) in the dataset. In our trial, the imputation for analyses will produce 50 imputed datasets based on participants' profile, e.g., age, sex, education, nicotine dependency, quit attempts, and intention to quit.

Reference:

7. Sterne JAC, White IR, Carlin JB, Spratt M, Royston P, Kenward MG, et al. Multiple imputation for missing data in epidemiological and clinical research: potential and pitfalls. *BMJ*. 2009;338:b2393.

C24. Usually one should be cautious about too many pre-planned sub-group analyses.

R24. Thanks for the advice. The pre-specified subgroup analysis (secondary analysis) is exploratory in nature according to evidence of our previous trials that the following factors may have different influence on intervention effect: age, sex, education level, household income, previous quit attempt, cigarette dependence and intention to quit.

C25. As intervention adherence will be assessed will there be a per protocol analysis as well as ITT?

R25. Thanks for the question. The intervention adherence will be analyzed within the participants in the intervention group (i.e., adherent subgroup vs. non-adherent subgroup). We will apply intention-to-treat principle and regards all participants as originally allocated after randomization. Please see statistical analyses (p.7) for details as followed: "*Data will be analyzed according to intention-to-treat (ITT) principles…We will also examine the association between intervention adherence (e.g., received referral, used smoking cessation services, received financial incentive) and the primary outcome within the participants in the intervention group.*"

C26. It is good that a qualitative process evaluation is planned but more detail is needed as to the aims and objectives of the process evaluation.

R26. Thanks for the suggestion. The details and objectives of the qualitative study have been added (p.7) as followed:
"Post-trial qualitative evaluation
Qualitative evaluations using a subsample of participants receiving the intervention will be conducted after the end of the study. The semi-structured interview aims to explore participants' experience of the intervention and adherence to it, and obtain study feedback. The sample size for the qualitative evaluation will be determined by data saturation. Participants will be sampled purposively based on sociodemographic characteristics, smoking status and intervention adherence. We anticipate that up to 20 participants will be included subject to data saturation. All interviews will be audio-recorded and transcribed verbatim. The transcripts will be organized using a thematic framework [30] based on topics specified in the interview guide and emerging themes identified through a process of familiarization with the transcripts."

Discussion

C27. I am not convinced of the novelty of this trial in providing incentives to promote service engagement, as other trials have taken this approach. Perhaps the novelty is in application in this country/context? This needs clarifying. The authors correctly acknowledge as a limitation that

analysis will not be able to establish the relative effect of the enhanced referral model against the incentive within the intervention.

R27. We would like to clarify that the evidence seems showing that our study is one of the very few in the literature on investigating the incentive plus active referral for smoking cessation. We understand that there are many trials on incentives for quitting or service use, but seems very few on active referral to smoking cessation services. We have now revised the statement on the novelty of this trial (p.8) as followed: *"This trial uses active referral plus a financial incentive as a model to increase smoking cessation attendance and abstinence in the community."* We addressed the limitations of the multicomponent intervention as followed: *"First, the trial is pragmatic and cannot completely disentangle the effect of each intervention component (brief advice, active referral, financial incentive). However, we are more interested in the combined effect of the multicomponent trial, which targets several barriers for maintaining abstinence. Future research comparing the effect of different levels of active referral (e.g., CBR plus incentive vs. CBR only) on abstinence is warranted."*
Please also refer to R23 on similar issue.

VERSION 2 – REVIEW

REVIEWER	Timothy baker University of Wisconsin
REVIEW RETURNED	06-Aug-2020

GENERAL COMMENTS	This is a careful and competent revision. I had just a couple of questions and suggestions. --It is unclear what 'sharing of successful quitters' means in lines 28-29 p. 5. --on line 49 p. 5 the authors say 'do it again if it fails.' The 'it' is unclear here. --" Post-payment financial incentives are distributed to participants in the intervention group who self-report using the smoking cessation service at 1-, 2-, and 3-month follow-ups." The authors should make clear that there is no objective evidence of service use—the service programs apparently do not provide confirmation of participation. If this is so it should be listed as a limitation in the Discussion. --" To increase participation, participants receive a cash incentive of HK$500 (≈ US$64) for passing the biochemical validation." Is this for both the 3 and 6 month time points? (p6) --The protocol should make clear whether any data are gathered on those refusing to agree to participate—i.e., the number approached who refuse. This would provide vital information on the reach of this intervention. If such data are not gathered, this is a limitation.

VERSION 2 – AUTHOR RESPONSE

Reviewer 1's comments

Please leave your comments for the authors below

This is a careful and competent revision. I had just a couple of questions and suggestions.

C28. It is unclear what 'sharing of successful quitters' means in lines 28-29 p. 5.

R28. Thanks for the suggestion. We have revised the sentence as followed: *"The contents of the workshop include: ….4) sharing sessions of ex-smokers"*

C29. on line 49 p. 5 the authors say 'do it again if it fails.' The 'it' is unclear here.

R29. Thanks for the comments. We have now revised as followed: *"Do it again if smokers fail to quit"*.

C30. "Post-payment financial incentives are distributed to participants in the intervention group who self-report using the smoking cessation service at 1-, 2-, and 3-month follow-ups." The authors should make clear that there is no objective evidence of service use—the service programs apparently do not provide confirmation of participation. If this is so it should be listed as a limitation in the Discussion.

R30. Thank you very much for your comments and suggestions. We have now acknowledged this limitation as followed: *"Third, the evidence on the use of smoking cessation services is based on self-reporting. This is done for practical reasons as the records of service utilization cannot be directly obtained by the research team."*

C31. "To increase participation, participants receive a cash incentive of HK$500 (≈ US$64) for passing the biochemical validation." Is this for both the 3 and 6 month time points? (p6)

R31. Thanks and we have revised the sentence as followed: *"To increase participation, participants receive a cash incentive of HK$500 (≈ US$64) for passing the biochemical validation at 3 and 6 months."*

C32. The protocol should make clear whether any data are gathered on those refusing to agree to participate—i.e., the number approached who refuse. This would provide vital information on the reach of this intervention. If such data are not gathered, this is a limitation.

R32. Thanks for the advice. Smoker's who refuse participation will be asked the reason for declining participation and we will report the the number of smokers who are eligible but refuse to participate. We have explained this in Treatment integrity Section as followed: *"Eligible smokers who decline to participate are asked to provide a reason for refusing. Information on the number of approached smokers is gathered and the declining reasons are recorded verbatim by smoking cessation advisors."*