

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	The ART of conversation: Feasibility and acceptability of a pilot peer intervention to help complex HIV-positive people transition from hospital to community
AUTHORS	Eaton, Andrew; Chan Carusone, Soo; Craig, Shelley; Telegdi, Erin; McCullagh, John; McClure, David; Wilson, Walter; Zuniga, Leonardo; Berney, Kevin; Ginocchio, Galo; Wells, Gordon; Montess, Michael; Busch, Adam; Boyce, Nick; Strike, Carol; Stewart, Ann

VERSION 1 - REVIEW

REVIEWER	Dr. Jessica Magidson and Dr. Jennifer Belus Department of Psychology, University of Maryland, College Park, USA
REVIEW RETURNED	02-Nov-2018

GENERAL COMMENTS	<p>This manuscript entitled “The ART of conversation: Feasibility and acceptability of a pilot peer intervention to help complex HIV-positive people transition from hospital to community” is an uncontrolled study assessing feasibility and acceptability of a pilot intervention for HIV-positive patients transitioning from hospital to community setting in Toronto, Canada. I applaud the authors for using a community participatory research framework and incorporating community members living with HIV throughout the research process. The development of this intervention serves an important gap in the literature, namely helping patients successfully transition to community living through the use of a peer intervention, which seems very appropriate. The paper’s strengths include a thoughtful CBPR framework and collecting initial data on acceptability and feasibility. There are numerous limitations with the uncontrolled design that the authors appropriately acknowledge. Additional concerns and clarifications are listed below.</p> <p>First, the authors state that their primary study goals of feasibility and acceptability would be assessed via individual interviews and subsequent qualitative analyses. They did not, however, state whether a particular theoretical lens or framework was being used to guide the analyses, nor describe the main themes that emerged or many descriptive quotes. This was surprising, given that the authors stated that interviews were on average 40 minutes in length. I imagine the researchers have plenty of rich material to draw upon. The actual results on the intervention’s acceptability was very limited. Moreover, the authors presented very few quotations as evidence of their conclusions. .</p>
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	<p>Secondly, I think the authors' decisions about various methodological aspects of the study could be better described and rationale provided.</p> <ul style="list-style-type: none"> • On Page 5, the authors state that neither randomization or a control group were possible; please explain further. • Section 2.0. Methods. The authors also used descriptive quantitative data to assess feasibility of the study, and this should be acknowledged here • Section 2.3.1. In the patient eligibility criteria, was alcohol use included? • For exclusion criteria, it is generally assumed in research that participants are only allowed to participate once and could be removed as an exclusion criterion. If there was a particular reason why the authors included this as an exclusion criterion, please explain; otherwise, this should be removed. Should 'poor health' be added as an exclusion criterion? Relatedly, please specify the number of people who were eligible and provide more detail on why those of 'poor health' were not invited to participate. I understand why those at risk of mortality were not invited to participate, but why were the others excluded? How was poor health measured? • Where the authors described the measures chosen to assess the various aims (Section 2.5.1), I found it difficult to keep track of the related yet distinct outcomes and how they were being measured. I would recommend a table with the aims, outcomes, and how the authors were assessing the constructs of interest. • Relatedly, in Section 2.2., I found this section confusing about what exactly the researchers did. I think this could be rephrased to be clearer about what exactly was done. It seems like four different activities were conducted, so perhaps begin by stating this so it is easier for readers to follow the various components that were involved. • Did the nurses receive any training to help patients with goal setting? Relatedly, please justify why the nurses delivered the goal-setting component (vs. the PVs) • How were PVs matched with participants? What were the criteria or what was the process? • Did PVs receive any training in how to rate participants on the various dimensions after the phone calls? Or were guidelines used to help PVs assign these ratings? Please also discuss the potential bias in assessment when having the PVs to conduct these assessments. • "Peer researchers" term made it unclear whether peers were seen as interventionists or researchers on the team. • The use of phones was a limitation to the feasibility of this approach, which the authors describe in the Discussion. Did this barrier come up in the formative phase based on community input? • For 2.6. Sample size, the authors should reference other feasibility intervention research that uses similar sample sizes to show precedent for the chosen sample size. The authors should explain what the hospital moving locations has to do with the overall sample size chosen • In 2.7. Data analysis, the authors refer to 'proof of concept'. What does that mean in the context of this study? • Results of Table 1 should be referenced in text and an overview provided of some of the important demographics of the sample. M and SD are usually given to 2 decimal places in a table, though with small samples it can be appropriate to provide one decimal
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	<p>place only. Also, what are the other comorbidities that are referenced?</p> <ul style="list-style-type: none"> • Figure 1 should be presented in traditional academic style following consort diagram recommendations. Additionally the “clinical estimate” of ineligibility seems arbitrary. Suggest removing it or providing more detail on how estimate was developed. • Figure 2. What were the “open- participant identified” categories? Secondly, please reformat so that the groups are clear still when black and white. • Figure 3. Please provide a caption to provide the reader greater description to interpret these assessments. <p>Finally, the majority of the discussion was focused on study strengths and limitations, rather than putting the study findings into context with previously conducted research. I did appreciate how the authors showed how study findings could be relevant to both clinicians and policy makers. Limitations were also discussed in two places in the discussion.</p>
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REVIEWER	Barbara Castelnovo Infectious Diseases Institute Uganda
REVIEW RETURNED	27-Nov-2018

GENERAL COMMENTS	<p>I really enjoyed really enjoyed reading this manuscript and I like the intervention that the authors present and evaluate in their study.</p> <p>I have 2 minor comments</p> <p>page 4 line 36. I do not necessarily agree with the authors' statement that "governments were slow to respond to AIDS in its early years, people living with and affected by HIV formed community-based agencies and implemented peer-based models of care". This is a very general statement and it may not reflect the efforts of some governments. I think there may be other reasons for community based and peer based models of care, I personally think that stigma and fear to disclosure were drivers to these processes. In some settings, stigma has been related not only to the HIV status, but to the high risk group (MSM, dug user, sex workers etc) the infected individuals belonged to</p> <p>Page 2 line 3. I suggest that the author change the wording "HIV hospital" as it can be interpreted and discriminatory. I additionally suggest that this paragraph is moved to the methods under a new "study settings" paragraph and expanded to explain more the activities of this facility, who gets admitted and why the average duration is so long</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

1. This manuscript entitled “The ART of conversation: Feasibility and acceptability of a pilot peer intervention to help complex HIV-positive people transition from hospital to community” is an uncontrolled study assessing feasibility and acceptability of a pilot intervention for HIV-positive patients transitioning from hospital to community setting in Toronto, Canada. I applaud the authors for using a community participatory research framework and

incorporating community members living with HIV throughout the research process. The development of this intervention serves an important gap in the literature, namely helping patients successfully transition to community living through the use of a peer intervention, which seems very appropriate. The paper's strengths include a thoughtful CBPR framework and collecting initial data on acceptability and feasibility. There are numerous limitations with the uncontrolled design that the authors appropriately acknowledge. Additional concerns and clarifications are listed below.

Response: Thank you for this assessment of our work.

2. First, the authors state that their primary study goals of feasibility and acceptability would be assessed via individual interviews and subsequent qualitative analyses. They did not, however, state whether a particular theoretical lens or framework was being used to guide the analyses, nor describe the main themes that emerged or many descriptive quotes. This was surprising, given that the authors stated that interviews were on average 40 minutes in length. I imagine the researchers have plenty of rich material to draw upon. The actual results on the intervention's acceptability was very limited. Moreover, the authors presented very few quotations as evidence of their conclusions.

Response: Thank you for the opportunity to clarify our analysis framework and add more depth to the results. We used content analysis for the interview data, and have added the following sentence to Data Analysis (Section 2.7, page 9, lines 27-30):

Content analysis, as used in other qualitative assessments of intervention research [36] included discussion on how findings corresponded to the study's objectives, and which quotes illuminated the facilitators and barriers of each intervention component [37].

Additionally, we have clarified that our acceptability results are detailed across pages 11 to 13 (broken down by each intervention component) by renaming the subsections with titles such as 'goal-setting acceptability'. Further, we have added three additional quotes. Two of these three have been added to goal setting acceptability (Section 3.5.2.1, page 13, lines 3-20), with one of the quotes addressing the benefit of having a nurse do this activity (per reviewer comment #9):

One participant described the goal-setting process thusly:

[The nurse and I] went over my needs and my goals. Where my frame of mind was at. What things did I think would help me turn this rig around, kinda? [The nurse] figured who I could see to help me along the way...she was top shelf, y'know?... Like hey, yeah, she let me talk and she let me kind of lead the way and then she wrote down [my goals]. It [took] about twenty minutes, and then again after she wrote everything down and she filled out her form, then came back and showed me...to verify she had captured everything (P15, male).

Another participant talked about how familiarity with the nurse helped the goal-setting process:

Me and [nurse] have always gotten along great. Well, I get along with all the nurses but there's a couple that I can talk to about anything and she's one of them...it made me think, let's try this [program]. Give it a fair shot (P16, female).

The third added quote is to post-discharge phone call acceptability (Section 3.5.2.3, page 14, lines 15-21) and reads as follows:

Phone calls occasionally occurred at important times for participants, as shown in the following quote:

A lot of the time I couldn't get in touch with my [in-person outpatient supports] but my peer would call me every week, she was a big help. I almost had a few relapses, but I didn't [relapse]. Actually it was my peer, once I was about to use and she called me! It was so weird, but in a good way. I told her I really need this call right now (P13, female).

3. On Page 5, the authors state that neither randomization or a control group were possible; please explain further.

Response: We have expanded this sentence (section 2.1, page 5, lines 46-48) to now read as follows:

Neither randomization nor a control group were feasible due to the limited sampling frame and one-year timeline.

4. Section 2.0. Methods. The authors also used descriptive quantitative data to assess feasibility of the study, and this should be acknowledged here

Response: We have now acknowledged the use of descriptive quantitative data, so this sentence (section 2.0, page 5, line 38) now reads as:

This study used descriptive quantitative data and qualitative methods to evaluate feasibility and acceptability of a pilot peer intervention that involved people living with HIV in the study's design and conduct.

5. Section 2.3.1. In the patient eligibility criteria, was alcohol use included?

Response: Alcohol use was not included, it was just illicit substances. This has now been clarified (section 2.3.1, page 6, line 46).

6. For exclusion criteria, it is generally assumed in research that participants are only allowed to participate once and could be removed as an exclusion criterion. If there was a particular reason why the authors included this as an exclusion criterion, please explain; otherwise, this should be removed. Should 'poor health' be added as an exclusion criterion? Relatedly, please specify the number of people who were eligible and provide more detail on why those of 'poor health' were not invited to participate. I understand why those at risk of mortality were not invited to participate, but why were the others excluded? How was poor health measured?

Response: We agree and have removed the exclusion criterion of duplicate participation. The 'poor health' criterion was measured as risk of mortality. For clarity, risk of mortality has been added to exclusion criteria (Section 2.3.1, page 6, line 49) and 'Participant flow' (Section 3.1, page 9, lines 43-47) has been revised per this comment and reviewer comment #17 to:

Figure 1 shows the flow of participants throughout the study. Of the ninety inpatient admissions at CH during the recruitment period, 73 were excluded due to: a) an eligibility review of admission presentation, namely mortality risk (n=21) and unidentified substance use (n=40); b) death in hospital (n=10); and c) declining to participate (n=2).

7. Where the authors described the measures chosen to assess the various aims (Section 2.5.1), I found it difficult to keep track of the related yet distinct outcomes and how they were being measured. I would recommend a table with the aims, outcomes, and how the authors were assessing the constructs of interest.

Response: We have taken your recommendation and added a table describing the outcomes and how they were assessed (Section 2.5, page 8, table 1):

Table 1: Outcomes and measures		
Outcomes	Measures	Description
Feasibility	Participant recruitment and retention	Proportion of eligible participants who were recruited, consented, and completed the study
	Peer volunteer (PV) availability	Ability to match PVs with participants
	Connection to ACT	Participants accessing an ACT service (e.g., counselling, groups) within thirteen weeks after discharge
Acceptability	Semi-structured interviews at three times, conducted by peer researchers	Interview 1: Following PV meeting, prior to discharge Interview 2: Program conclusion (seven weeks after discharge) Interview 3: Follow-up (thirteen weeks after discharge)
	Contact logs	Reports from PVs following each phone call

8. Relatedly, in Section 2.2., I found this section confusing about what exactly the researchers did. I think this could be rephrased to be clearer about what exactly was done. It seems like four different activities were conducted, so perhaps begin by stating this so it is easier for readers to follow the various components that were involved.

Response: You are correct that we conducted four distinct activities to engage people living with HIV. The first sentence of this paragraph (Section 2.2, page 5, lines 53-54) now reads as:

People living with HIV became involved in this study as the concept was being developed and were engaged in four distinct activities.

9. Did the nurses receive any training to help patients with goal setting? Relatedly, please justify why the nurses delivered the goal-setting component (vs. the PVs)

Response: These two questions have now been addressed (Section 2.4.1, page 7, lines 18-24) as follows:

A nurse was chosen to complete this activity as a means of bridging the clinical care that participants had received in hospital, with the peer support that they would be receiving after discharge. The nurse was trained in Motivational Interviewing (i.e., client-centred counselling to elicit positive goal-setting) [32] and harm reduction principles (i.e., stating that participants could set substance use goals concerning reduced or safer use, not solely abstinence).

10. How were PVs matched with participants? What were the criteria or what was the process?

Response: Participant requests for shared experience (similar substance use history, similar length of time living with HIV) was accommodated as much as possible. This has been added (Section 2.4.2, page 7, lines 38-39) as follows:

The principal investigator matched a PV with a participant, based on participant requests (e.g., similar substance use history, length of time living with HIV, gender, etc.).

11. Did PVs receive any training in how to rate participants on the various dimensions after the phone calls? Or were guidelines used to help PVs assign these ratings? Please also discuss the potential bias in assessment when having the PVs to conduct these assessments.

Response: PV training for these assessments has been added (Section 2.5.1, page 9, lines 9-10) as follows:

PVs were trained to conduct these assessments through instruction on rating participants against how they presented in the initial peer volunteer meeting.

Additionally, the potential bias has been added to Limitations (Section 4.1, page 15, lines 38-40) as follows:

Measurement error may have occurred as PVs rated their participants; they may have biased these assessments in an attempt to show positive change [42].

12. "Peer researchers" term made it unclear whether peers were seen as interventionists or researchers on the team.

Response: There were two distinct groups of peers on the team: peer researchers (who collected and analyzed data) and peer volunteers (who delivered the intervention). The following line has been added to Section 2.2 (page 6, lines 18-19) to clarify this before defining each role:

There were two distinct groups of peers on this research team: a) peer researchers; and b) peer volunteers (PVs).

13. The use of phones was a limitation to the feasibility of this approach, which the authors describe in the Discussion. Did this barrier come up in the formative phase based on community input?

Response: Interestingly, the use of phones was specifically requested by people living with HIV during the formative phase. This has been added to Patient and Public Involvement (Section 2.2., page 6, lines 6-7) as follows:

CH clients living with HIV identified that post-discharge phone support could be easier to access than an in-person peer meeting.

14. For 2.6. Sample size, the authors should reference other feasibility intervention research that uses similar sample sizes to show precedent for the chosen sample size. The authors should explain what the hospital moving locations has to do with the overall sample size chosen

Response: We have referenced other pilot intervention studies that chose a sample size of fifteen and have explained that the hospital moving locations interrupted recruitment. The revised parts of Section 2.6 (page 9, lines 18-21) now read as follows:

...the hospital moved locations during our recruitment year, disrupting recruitment for approximately one month; and d) based on existing pilot studies, this sample size would allow the team to assess the feasibility and acceptability of intervention components across diverse experiences [34, 35].

15. In 2.7. Data analysis, the authors refer to 'proof of concept'. What does that mean in the context of this study?

Response: In revising this section per reviewer comment #2 above, 'proof-of-concept' has now been removed. Section 2.7 data analysis (page 9, lines 24-32) now reads as follows:

Research assistants (authors ten to twelve) transcribed interviews and entered data. The entire team held three iterative analysis meetings (four hours each) to read through the data and apply content analysis. Content analysis, as used in other qualitative assessments of intervention research [36] included discussion on how findings corresponded to the study's objectives, and which quotes illuminated the facilitators and barriers of each intervention component [37]. Contact log data is presented as a spaghetti plot; while the sample size limits our ability to interpret these findings, they provide context for the quotes.

16. Results of Table 1 should be referenced in text and an overview provided of some of the important demographics of the sample. M and SD are usually given to 2 decimal places in a table, though with small samples it can be appropriate to provide one decimal place only. Also, what are the other comorbidities that are referenced?

Response: We have added important demographics of the sample and types of comorbidities to the text (Section 3.3, page 10, lines 9-17) as follows:

Participants were predominately male (58.8%, n=10) and had an average age of 48.8 (SD=11.4). Comorbidities (M=7.8, SD=3.1) most commonly were cancer, hepatitis C, and COPD; participants also had mental health diagnoses (M=3.2, SD=1.5), most commonly mood disorders (e.g., bipolar, depression) and organic mental disorders (e.g., HIV-associated neurocognitive disorder). Substances identified were mostly cocaine (47.1%, n=8), opioids (29.4%, n=5), and crystal meth (29.4, n=5). Participants were in hospital for an average of 44.3 days (SD=42.4) and were taking an average of 11.8 (SD=6.2) medications at discharge.

Additionally, the demographics table (now Table 2) has been revised to list M and SD to one decimal place (Section 3.3, page 10-11, table 2).

17. Figure 1 should be presented in traditional academic style following consort diagram recommendations. Additionally the "clinical estimate" of ineligibility seems arbitrary. Suggest removing it or providing more detail on how estimate was developed.

Response: Figure 1 has been revised using the Consort diagram template. The "clinical estimate" of ineligibility has been removed. Now that we have clarified that mortality risk was an exclusion criterion (see response to reviewer comment #6), 'Participant flow' (Section 3.1, page 9, lines 43-47) now reads as follows:

Figure 1 shows the flow of participants throughout the study. Of the ninety discrete inpatient admissions at CH during the recruitment period, 73 were excluded due to: a) an eligibility review of admission presentation, namely mortality risk (n=21) and unidentified substance use (n=40); b) death in hospital (n=10); and c) declining to participate (n=2).

18. Figure 2. What were the "open- participant identified" categories? Secondly, please reformat so that the groups are clear still when black and white.

Response: The most common participant-identified goals concerned housing and social connection. This has been added to the text (Section 3.5.2.1, page 12, lines 47-48) and to Figure 2. Further, Figure 2 has been reformatted so that it still displays clearly when black and white.

19. Figure 3. Please provide a caption to provide the reader greater description to interpret these assessments.

Response: We have added this caption to Figure 3: "Peer volunteer assessment of participants following each call" (see Figure legend, page 22).

20. Finally, the majority of the discussion was focused on study strengths and limitations, rather than putting the study findings into context with previously conducted research. I did appreciate how the authors showed how study findings could be relevant to both clinicians and policy makers. Limitations were also discussed in two places in the discussion.

Response: We have added detail on two additional peer support HIV trials, as context for considering a next phase of our study (Section 4.0, page 15, lines 17-20):

A larger study should consider results from other peer support trials, such as a null effect on antiretroviral adherence due to low-intensity (i.e., phone support) interventions [39] and significant results in adherence and care retention through home visits [40].

Further, we have moved all study limitations to the Limitations section (Section 4.1, page 15, lines 28-42), which now reads as follows:

This study has several limitations. Without randomization and control and with a small sample, there remains uncertainty regarding the two promising intervention components (goal-setting and peer meeting). Other peer support studies have found significant effects in larger samples by focusing on a single issue of concern [19, 20]. A PPI limitation was the mixed results from the post-discharge phone calls. Phone support had been specifically requested from current and former CH clients living with HIV, during our consultations to design this study, as they perceived it to be a convenient and minimally disruptive way of accessing peer support. There is a risk of selection bias as eligible participants who were at risk of mortality were not approached [41]. Measurement error may have occurred as PVs rated their participants; they may have biased these assessments in an attempt to show positive change [42]. Incomplete participation amongst a small sample requires that the results be interpreted with some caution.

Reviewer: 2

1. I really enjoyed reading this manuscript and I like the intervention that the authors present and evaluate in their study.

Response: Thank you for your review.

2. Page 4 line 36. I do not necessarily agree with the authors' statement that "governments were slow to respond to AIDS in its early years, people living with and affected by HIV formed community-based agencies and implemented peer-based models of care". This is a very general statement and it may not reflect the efforts of some governments. I think there may be other reasons for community based and peer based models of care, I personally think that stigma and fear to disclosure were drivers to these processes. In some settings, stigma has been related not only to the HIV status, but to the high risk group (MSM, drug user, sex workers etc) the infected individuals belonged to.

Response: This is an excellent point. The purpose of this sentence was to acknowledge the history and ongoing work of peers in community-based agencies, so the sentence (section 1.0, page 4, line 35) has been revised as follows:

From the first cases of AIDS to the present day, people living with and affected by HIV have been forming community-based agencies and implementing peer-based models of care [21, 22].

3. Page 2 line 3. I suggest that the author change the wording "HIV hospital" as it can be interpreted and discriminatory. I additionally suggest that this paragraph is moved to the

methods under a new "study settings" paragraph and expanded to explain more the activities of this facility, who gets admitted and why the average duration is so long

Response: "HIV hospital" has been reworded to "hospital for people living with HIV" in all instances (such as page 2, lines 12-13). Further detail on the hospital has been added to the Study Settings paragraph (section 1.2, page 5, lines 23-31) as follows:

CH is Canada's only standalone hospital for people living with HIV. CH has fourteen inpatient beds for sub-acute, palliative, and respite care. Inpatient admissions average approximately 45 days due to mortality risk amongst most patients. CH also offers community programs, and during the operation of this study launched a day health program to better support adults living with HIV and complex health and psychosocial conditions.

VERSION 2 – REVIEW

REVIEWER	Drs. Jessica Magidson and Jennifer Belus University of Maryland College Park
REVIEW RETURNED	26-Jan-2019

GENERAL COMMENTS	<p>The authors were very responsive to prior critiques, and their changes have substantially strengthened the manuscript. Largely only minor questions and clarifications remain, which are listed below. The only substantial comment is that more elaboration is still needed in the Discussion in the 'interpretation' section. The focus of the discussion is now on the feasibility and acceptability of the goal-setting and peer volunteer meeting strategies. The authors could put these findings more into context by discussing prior studies that have used these approaches to helping PLWH engage in treatment. But otherwise the manuscript is very clear, and below are the remaining minor comments and clarifications.</p> <p>Minor comments:</p> <ol style="list-style-type: none"> 1. Page 5, line 39 is missing the word 'of'; should be "acceptability of a pilot peer intervention" 2. The eligibility criteria should be written in past tense. 3. I think the authors use of a table to present their outcomes was very helpful. Only remaining question was how the authors conceptualize the "connection to ACT" outcome - it still wasn't entirely clear if "connection to ACT" is a feasibility outcome, or rather a separate linkage to care outcome. 4. On Pages 8-9 the authors provide more detail on how PVs rated the post-discharge calls with participants. A bit more information is still needed. Could they give a few examples of the types of characteristics that PVs were paying attention to in their ratings? Along these lines, please define what individual, social, and interpersonal domains of functioning were assessing. 5. Page 9. More details are needed on what constituted 'mortality risk' for participants who were excluded from the study. 6. Page 9. Please elaborate on the n=40 with unidentified substance use. 7. Page 10. Please define COPD. Also, please refer to 'bipolar disorder' or 'bipolar symptoms' not 'bipolar' when describing mental health comorbidities. 8. Page 11. Authors state that 7 people did not complete the intervention. Shouldn't this number be 5 people if 12 people
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	<p>completed the intervention (as stated below and in the consort diagram)? Please clarify.</p> <p>9. Page 14. Lines 19-22 is duplicate information about how the PVs rated the phone calls.</p> <p>10. Page 15, line 27. I would not call this measurement error, since that is a statistical term. I think describing this limitation as biasing how the construct was measured is appropriate.</p> <p>11. Page 15, lines 43-44 state 'a study of this nature does no harm'. However, it is more appropriate to say "we found no evidence of study harm" since it's possible a study like this could do harm.</p> <p>Abstract:</p> <ol style="list-style-type: none"> 1. What do the authors mean by "approximately 40 people" met criteria for the study? 2. Please clarify whether 'comorbidities' includes physical and mental health comorbidities. If so, authors may consider revising to 'physical and mental health comorbidities'. 3. The last sentence of the 'participants' section describes the results. This should be moved. 4. The authors state that a goal of the study is to facilitate connection to a community-based organization, but how this is assessed is not discussed under 'primary outcomes'.
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VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

1. The only substantial comment is that more elaboration is still needed in the Discussion in the 'interpretation' section. The focus of the discussion is now on the feasibility and acceptability of the goal-setting and peer volunteer meeting strategies. The authors could put these findings more into context by discussing prior studies that have used these approaches to helping PLWH engage in treatment.

Response: We have elaborated on the 'interpretation' section of the Discussion, discussing our study's findings in the context of other similar studies. This section now reads as follows (page 15, lines 54-55 and page 16, lines 3-24):

While there is some uncertainty regarding this study's benefits, we found no evidence of study harm. Peer support has been found effective on single issues regarding HIV (such as medication adherence) [19, 20]; this study's attempt to pilot peer support regarding more complex needs is a first step towards better supporting the more marginalized people living with HIV who require more targeted support than is currently offered. This study's positive results with connection to ACT services aligns with other studies that found improved care engagement as a result of a peer intervention [40, 43, 44]. Qualitatively, this study's participants expressed views similar to other peer intervention studies regarding the ease of speaking with a peer and the benefit of shared experience [19, 45, 46]. However, this study found that PVs and participants were able to connect despite differences in age, health status, and other demographics, which differs from other studies that recommend peers share as many subgroup characteristics as possible [45, 47].

The PPI approach helped facilitate study recruitment and the first two intervention components, yet the third component (post-discharge phone calls) received mixed results despite its PPI influence. Given this study's results and in-person peer support

showing better outcomes than post-discharge phone calls in other quasi- experimental studies [48, 49], a future post-discharge peer support study could combine phone and in-person meetings. Multiple methods of engagement may be more acceptable to participants and contribute to greater completion rates, which could lead to better outcomes.

2. Page 5, line 39 is missing the word 'of'; should be "acceptability of a pilot peer intervention"

Response: 'Of' has been added alongside the linkage to community supports outcome (see reviewer response #4) so the sentence now reads as "...to evaluate feasibility, acceptability, and linkage to community supports of a pilot peer intervention..." (page 5, line 38-39).

3. The eligibility criteria should be written in past tense.

Response: The eligibility criteria has been rewritten in past tense, and now reads as follows (page 6, lines 46-50):

Inclusion criteria: People who were HIV-positive; actively used illicit substances (e.g., cocaine, crystal meth, etc.); inpatient at CH between April 1, 2017 and March 31, 2018; initiated/re-started antiretroviral therapy while they were inpatient at CH; were discharged back to the community; English-speaking; could access a phone; and provided informed consent.
Exclusion criteria: People who were at risk of mortality.

4. I think the authors use of a table to present their outcomes was very helpful. Only remaining question was how the authors conceptualize the "connection to ACT" outcome - it still wasn't entirely clear if "connection to ACT" is a feasibility outcome, or rather a separate linkage to care outcome.

Response: Thank you for the opportunity to make this clarification. Connection to ACT was a separate linkage to community supports outcome. This has been revised in the abstract (see reviewer response #16 below) and in Outcomes (page 8, lines 11-13) as follows:

Connection to ACT (i.e., linkage to community supports) was determined through a search of client records to see if participants accessed any ACT service (such as counselling or support groups) within thirteen weeks after discharge.

Further, Table 1 (outcomes and measures; page 8) has been revised accordingly and 'Connection to ACT' has a distinct section in Results (text was moved from Feasibility results to this new section; page 14, lines 31-35).

5. On Pages 8-9 the authors provide more detail on how PVs rated the post-discharge calls with participants. A bit more information is still needed. Could they give a few examples of the types of characteristics that PVs were paying attention to in their ratings? Along these lines, please define what individual, social, and interpersonal domains of functioning were assessing.

Response: We have added in the characteristics for the four domains that PVs were asked to pay attention to (page 9, lines 4-7):

...how they felt the participant was doing individually (i.e., personal well-being), interpersonally (i.e., family and close relationships), socially (i.e., activity engagement, friendships), and overall (i.e., general sense of well-being).

Further, we have added an example of how PVs would assess these domains (page 9, lines 12-13):

For example, a PV would assess the interpersonal domain based on a participant's progress on reconnecting with their daughter, if the participant identified this goal in the initial meeting.

6. Page 9. More details are needed on what constituted 'mortality risk' for participants who were excluded from the study.

Response: We have clarified how mortality risk was assessed in the following sentence (page 9, lines 51-53):

Mortality risk was determined by an admission for palliative care or when the clinical team determined that a person was too medically unstable to participate.

7. Page 9. Please elaborate on the n=40 with unidentified substance use.

Response: We have elaborated in the following sentence (page 9, lines 53-54):

Unidentified substance use means that neither inpatients themselves nor their referring clinician identified substance use at admission.

8. Page 10. Please define COPD. Also, please refer to 'bipolar disorder' or 'bipolar symptoms' not 'bipolar' when describing mental health comorbidities.

Response: COPD has been defined as 'Chronic Obstructive Pulmonary Disease'. 'Bipolar' has been changed to 'bipolar disorder' and 'depression' has been changed to 'depressive disorders' (page 10, lines 17-20).

9. Page 11. Authors state that 7 people did not complete the intervention. Shouldn't this number be 5 people if 12 people completed the intervention (as stated below and in the consort diagram)? Please clarify.

Response: Thank you for catching this mistake. We have clarified that it was five people who did not complete the intervention (page 11, line 55), as per the consort diagram.

10. Page 14. Lines 19-22 is duplicate information about how the PVs rated the phone calls.

Response: The duplicate information has been deleted.

11. Page 15, line 27. I would not call this measurement error, since that is a statistical term. I think describing this limitation as biasing how the construct was measured is appropriate.

Response: We have rephrased this sentence to now read as follows (page 15, lines 39-40):

PV assessments of participants may have been biased, likely in the direction of showing positive change [42].

12. Page 15, lines 43-44 state 'a study of this nature does no harm'. However, it is more appropriate to say "we found no evidence of study harm" since it's possible a study like this could do harm.

Response: We have taken this suggestion and changed the sentence (page 15, lines 54-55) to read as follows:

While there is some uncertainty regarding this study's benefits, we found no evidence of study harm.

Abstract

13. What do the authors mean by "approximately 40 people" met criteria for the study?

Response: The word 'approximately' has been removed (page 2, line 18).

14. Please clarify whether 'comorbidities' includes physical and mental health comorbidities. If so, authors may consider revising to 'physical and mental health comorbidities'.

Response: Yes, comorbidities includes physical and mental health. We have revised this to read "...participants averaged 7.8 physical and mental health comorbidities (SD=3.1)" (page 2, lines 20-21).

15. The last sentence of the 'participants' section describes the results. This should be moved.

Response: This sentence has been moved to the Results section (page 2, line 36).

16. The authors state that a goal of the study is to facilitate connection to a community-based organization, but how this is assessed is not discussed under 'primary outcomes'.

Response: We have clarified that "Client records determined connection to ACT within the study timeframe." (page 2, lines 33-34).

VERSION 3 - REVIEW

REVIEWER	Drs. Jessica Magidson and Jennifer Belus University of Maryland, USA
REVIEW RETURNED	20-Feb-2019

GENERAL COMMENTS	The authors have addressed all prior concerns.
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