PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	From hearing to seeing: Medical dispatchers' experience with use of video streaming in medical emergency calls: a qualitative study
AUTHORS	Idland, Siri; Iversen, Emil; Brattebø, Guttorm; Kramer-Johansen, Jo; Hjortdahl, Magnus

VERSION 1 – REVIEW

REVIEWER	Linderoth, Gitte University of Copenhagen, Emergency Medical Services
REVIEW RETURNED	17-May-2022

| GENERAL COMMENTS | Thank you for inviting me to review this manuscript. It concerns a very valuable study. Overall this study is nicely done. It is well designed, well written, and provides a comprehensive evaluation of the medical dispatchers' experience with an innovative video stream program. I only have some minor comments.

In the participants' section in the abstract, you only write "dispatchers". Maybe you could clarify that it is "medical dispatcher" and maybe the number of registered nurses, paramedics or medical technicians.

If you have too many words in the abstract this sentence is redundant in my opinion: "As of yet, little scientific knowledge on such use of video streaming during medical emergency calls exists."

You write "main themes" in the results section but never discuss subthemes in the paper. Did you define subthemes in your analysis?

Interview of callers is not a part of the study, so maybe it is more an assumption from the dispatchers than a conclusion of the study that video stream might lead to an improved experience for the callers as described in the abstract. Somehow if think you have to modify the conclusion concerning the callers in the conclusion section of the abstract.

In the methods section, I believe it is very important to get an idea of the persons who got interviewed and who did not want to participate. As I understand the process the leaders (or a key employee) chose the participants or were all dispatchers invited by e-mail? Were the interviews conducted doing working hours at the EMDC or did they have to use spare time? Was it paid? How many were asked and how many did not want to participate? You include dispatchers who have not used video in real emergencies - how many of the interviewed dispatchers had not used it in real life? What was the timeframe for the interviews? How many was registered nurses, paramedics, or medical technicians? Maybe you could illuminate |
|---|---|

some of these issues.

The interviews were conducted in the spring of 2020 (page 4., l. 33) but the video solution was piloted from the beginning of June? (page 5, l. 53). Was some of the interviews before the implementation?

"All dispatchers in the two EMCCs completed an educational program to utilize the video solution". (Page 4, l. 52). Could you describe very shortly what was done? Training and education can influence the dispatchers' experience when a new solution is introduced. Just very briefly.

In advance you made an interview-guide. Did you modify the interview-guide after the interviews? Could the interview-guide be attached as supplementary?

You conclude that a live video stream might improve precise resource allocation. But do we know if the triage is appropriate even after the patient can be evaluated with video? To my knowledge, we still need to investigate this further -maybe with the inclusion of ambulance or hospital records. A conclusion could be that the dispatchers are more comfortable with their decision-making process and think the allocation of recourses is more precise.

The primarily focus of your study is not OHCA, but OHCA is a part of both the background and discussion section. If you want to discuss CPR you could consider to include our study from Copenhagen, the study from Seoul or the systematic review which includes real OHCA cases where a live stream video had been used. [1–3]

[1] Lee HS, You K, Jeon JP, Kim C, Kim S. The effect of video-instructed versus audio-instructed dispatcher-assisted cardiopulmonary resuscitation on patient outcomes following out of hospital cardiac arrest in Seoul. Sci Rep 2021;11:15555. https://doi.org/10.1038/s41598-021-95077-5.
[2] Linderoth G, Rosenkrantz O, Lippert F, Østergaard D, Ersbøll AK, Meyhoff CS, et al. Live video from bystanders' smartphones to improve cardiopulmonary resuscitation. Resuscitation 2021;168:35–43. https://doi.org/10.1016/j.resuscitation.2021.08.048.
[3] Bielski K, Böttiger BW, Pruc M, Gasecka A, Sieminski M, Jaguszewski MJ, et al. Outcomes of audio-instructed and video-instructed dispatcher-assisted cardiopulmonary resuscitation: a systematic review and meta-analysis. Annals of Medicine 2022;54:464–71. https://doi.org/10.1080/07853890.2022.2032314.

In the discussion section you only very short mention the theme about unpleasant visual impressions. As I understand none of the dispatchers had problems after watching the videos, but it was a potential challenge so they chose not to use video in some cases, or did any of the dispatchers have a problem after watching a video?

REVIEWER	Chen, SC Chung Shan Medical University, Institute of Medicine & School of Medicine
REVIEW RETURNED	20-May-2022

| GENERAL COMMENTS | (1) Please describe the definite study period rather than "the spring of 2020" in the abstract and in the methods section.
(2) In the abstract, please describe the number of dispatchers (including the number of nurses, emergency medical technicians, |

and paramedics) who participated in the present study.

(3) In the abstract, please describe the number of dispatchers in the three main themes separately.

(4) Please provide the information (data being expressed as the number with percentage or mean ± SD with range) including age, sex, job, seniority, educational level, and the number of using video streaming in medical emergency calls among the dispatchers, which giving readers a clear feature regarding these dispatchers.

(5) Please describe the contents (including courses and credit hours) of the educational program for these dispatchers concisely in a table.

(6) What were the contents of the video streaming technology? Please briefly describe it.

(7) Did the two EMCCs have the same video streaming technology? Please clarify it.

(8) How much image resolution was enough for the smartphones in the present study?

(9) In the results section, please provide the number of dispatchers (including the number of nurses, emergency medical technicians or paramedics) in the findings rather than "most", "several", "some", or "a few". The authors should put the main themes and their meaning units with the corresponding number of dispatchers (including the number of nurses, emergency medical technicians or paramedics) in a table (or tables). Please revise them.

(10) Were there differences in the main themes and their meaning units among nurses, emergency medical technicians and paramedics? Please explain it.

(11) Because this study was limited by its qualitative design, the subjective perceptions in the findings cannot show some cause-effect conclusion. Moreover, the present study cannot clarify the association between the baseline characteristics of dispatchers and the main themes. Please revise the limitations.

(12) The description of "The use of video streaming in medical emergency calls might contribute to a better comprehension of the situation and more precise resource allocation, as well as improved experience of the call for both the dispatcher and the caller" is not appropriate for the conclusion. Based on these subjective perceptions of the dispatchers in the findings, these dispatchers may feel a better comprehension of the situation, a more precise resource allocation, and an improved experience of the call for both the dispatcher and the caller when using video streaming in medical emergency calls. Please revise the conclusion.

REVIEWER	Reuter, Paul-Georges SAMU 93, UF Recherche-Enseignement-Qualité
REVIEW RETURNED	24-May-2022

GENERAL COMMENTS	Reviewing of: "From hearing to seeing: Medical dispatchers' experience with use of video streaming in medical emergency calls: a qualitative study" by Idland et al.. Thank you for this opportunity of reviewing. The authors conducted a qualitative analysis of how dispatchers working in EMCCs feel about the use of video. This study is very much in line with the increasing use of video. I declare a conflict of interest here because the EMCC I work in uses video and I am a believer. It is possible to add this reference, from another French team: Pineau G, Jenvrin J, Péré M, Penverne Y, Montassier E, Martinage A. Videoconferencing in the emergency medical dispatch center: A

pilot study. Am J Emerg Med. mars 2021;41:257-8.

Method:
The occupation of the participants is unclear in the manuscript. Are they doctors, nurses and paramedics or only doctors? More generally, are call takers able to use video? In France, the video are for doctors.

The authors have used a qualitative method, which is necessary to answer their question. I am not an expert in the qualitative method. Does the methodology require a calculation of the number of subjects needed?

Some results are presented in the methodology. It would be relevant to describe the population in the results section.

Résultats

The results are reported in accordance with qualitative methods. I think it is necessary to describe the population in the first step. If several functions are represented in the participants (doctor, nurse, paramedic), were there any variations in feelings between functions?

Finally, authors reported a well-done study, on a topical subject and which concerns all the EMCCs worldwide. They can be congratulated for their work. I am curious to know their feelings, two years later.

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Gitte Linderoth, University of Copenhagen Comments to the Author:

Thank you for inviting me to review this manuscript. It concerns a very valuable study. Overall this study is nicely done. It is well designed, well written, and provides a comprehensive evaluation of the medical dispatchers' experience with an innovative video stream program. I only have some minor comments.

Dear Dr. Linderoth, thank you for your kind and useful comments. We appreciate very much the time you have spent helping us to improve our manuscript! Below we have answered your comments:

In the participants' section in the abstract, you only write "dispatchers". Maybe you could clarify that it is "medical dispatcher" and maybe the number of registered nurses, paramedics or medical technicians.

We agree and have changed the sentence in the participant section of the abstract to "25 medical dispatchers (…)".

If you have too many words in the abstract this sentence is redundant in my opinion: "As of yet, little scientific knowledge on such use of video streaming during medical emergency calls exists."

We agree and have removed this sentence in the abstract.

You write "main themes" in the results section but never discuss subthemes in the paper. Did you define subthemes in your analysis?

We used subgroups as part of the analysis. In systematic text condensation it is not common to present the subgroups explicitly, as they are a step in the analytic process. The subgroups we defined for each main theme were as follows:

Improved patient treatment – Correction of dispatcher's perception of the patient, patient assessment and instructions for caller, smoother clinical pathway for patient.

Reassurance and confirmation - Reassurance for dispatcher, reassurance for caller, empathy and cooperation with caller.

Worries with video use – Time use, discomfort for dispatcher caused by video streaming. In order to avoid confusion, we have changed from "main themes" to just "themes" in the manuscript.

Interview of callers is not a part of the study, so maybe it is more an assumption from the dispatchers than a conclusion of the study that video stream might lead to an improved experience for the callers as described in the abstract. Somehow if think you have to modify the conclusion concerning the callers in the conclusion section of the abstract.

We agree, this is merely the opinion of the dispatcher. We changed the sentence in the conclusion section of the abstract to "The dispatchers experience that (…) improved relationship between the dispatcher and the caller".

In the methods section, I believe it is very important to get an idea of the persons who got interviewed and who did not want to participate. As I understand the process the leaders (or a key employee) chose the participants or were all dispatchers invited by e-mail? Were the interviews conducted doing working hours at the EMDC or did they have to use spare time? Was it paid? How many were asked and how many did not want to participate? You include dispatchers who have not used video in real emergencies - how many of the interviewed dispatchers had not used it in real life? What was the timeframe for the interviews? How many was registered nurses, paramedics, or medical technicians? Maybe you could illuminate some of these issues.

We have elaborated the sentence about invitation and volunteers in the participants section in the methods chapter. We also removed a sentence in the limitations chapter on this matter to avoid any confusion.

The issue of whether the dispatchers were at work or used their spare time, and payment, has been addressed in the same section.

Information about the length of the interviews has also been added in the data collection section. We have added a sentence in the participants section of the methods chapter which states that all participants were either registered nurses or EMTs. When conducting the interviews, we chose not to collect information on the participants' education. This was done to reduce the risk of any recognition of individuals.

We have added a table to the manuscript with an overview of number of years of experience in the EMCC and how often video had been used for each dispatcher.

The interviews were conducted in the spring of 2020 (page 4., l. 33) but the video solution was piloted from the beginning of June? (page 5, l. 53). Was some of the interviews before the implementation?

The interviews were conducted after the implementation. The dates for when the interviews were conducted has been added to the data collection section, at the end of the sentence "interviews were conducted (…)".

"All dispatchers in the two EMCCs completed an educational program to utilize the video solution". (Page 4, l. 52). Could you describe very shortly what was done? Training and education can influence the dispatchers' experience when a new solution is introduced. Just very briefly.

All dispatchers participating in the study received 1 to 1 training. An e-learning course was developed and eventually used. We added a sentence in the second paragraph of the study setting section under the methods chapter.

In advance you made an interview-guide. Did you modify the interview-guide after the interviews?

Could the interview-guide be attached as supplementary?

After each interview, the interview guide was discussed, but no major modifications were done. We added some information under the data collection section in the sentence "MI, EI and GB developed and interview guide (…)".

The interview guide is attached to the manuscript. We originally uploaded it, but with the revision discovered that it was uploaded as supplemental material for editor only. This has now been changed, and the interview guide should be accessible for all.

You conclude that a live video stream might improve precise resource allocation. But do we know if the triage is appropriate even after the patient can be evaluated with video? To my knowledge, we still need to investigate this further -maybe with the inclusion of ambulance or hospital records. A conclusion could be that the dispatchers are more comfortable with their decision-making process and think the allocation of recourses is more precise.

We agree and have revised both the conclusion ("Several of them also experienced (…) resource allocation") and the conclusion in the abstract (The dispatchers experienced that (…) followingly more precise resource allocation").

The primarily focus of your study is not OHCA, but OHCA is a part of both the background and discussion section. If you want to discuss CPR you could consider to include our study from Copenhagen, the study from Seoul or the systematic review which includes real OHCA cases where a live stream video had been used. [1–3]

[1]   Lee HS, You K, Jeon JP, Kim C, Kim S. The effect of video-instructed versus audio-instructed dispatcher-assisted cardiopulmonary resuscitation on patient outcomes following out of hospital cardiac arrest in Seoul. Sci Rep 2021;11:15555.
https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1038%2Fs41598-021-95077-5&data=05%7C01%7Csiriid%40oslomet.no%7C28379dd5e17845f9517008da5e84ba46%7Cfec81f12628645508911f446fcdafa1f%7C0%7C0%7C637926221402016872%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=5aZteDmqpwFupb3tcfF9ktWzAUGVmyj4M2L33XXv1Rg%3D&reserved=0.

[2]   Linderoth G, Rosenkrantz O, Lippert F, Østergaard D, Ersbøll AK, Meyhoff CS, et al. Live video from bystanders' smartphones to improve cardiopulmonary resuscitation. Resuscitation

2021;168:35–43.
https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1016%2Fj.resuscitation.2021.08.048&data=05%7C01%7Csiriid%40oslomet.no%7C28379dd5e17845f9517008da5e84ba46%7Cfec81f12628645508911f446fcdafa1f%7C0%7C0%7C637926221402016872%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=wgQwrENKTCO2Xje%2FocSTHiXLCFkMN2KnZYyX0i0QwNk%3D&reserved=0.

[3]   Bielski K, Böttiger BW, Pruc M, Gasecka A, Sieminski M, Jaguszewski MJ, et al. Outcomes of audio-instructed and video-instructed dispatcher-assisted cardiopulmonary resuscitation: a systematic review and meta-analysis. Annals of Medicine 2022;54:464–71.
https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdoi.org%2F10.1080%2F07853890.2022.2032314&data=05%7C01%7Csiriid%40oslomet.no%7C28379dd5e17845f9517008da5e84ba46%7Cfec81f12628645508911f446fcdafa1f%7C0%7C0%7C637926221402016872%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=EsZQm3iGWzaLB%2FI9egzCbwectSsaIBUgZWcD3jMSMOA%3D&reserved=0.

Thank you for your inputs on these references. We have added number 1 and 3 to our manuscript's references as well as broadening the discussion somewhat.

In the discussion section you only very short mention the theme about unpleasant visual impressions. As I understand none of the dispatchers had problems after watching the videos, but it was a potential challenge so they chose not to use video in some cases, or did any of the dispatchers have a problem after watching a video?

Unpleasant images was mentioned by some as a potential issue with using video streaming. When we conducted the interviews, there were no dispatchers who had had problems. However, some mentioned situations where they had been "taken aback" and were not ready for the images they suddenly were exposed to. After two years with video streaming, we know that some dispatchers have had problems, but this is only known to us by rumors. It would be an interesting topic to bring back up in doing a similar project after more experience with video streaming in the EMCCs. We added the topic to relevant areas for further research under the future perspectives section.

Reviewer: 2

Prof. SC Chen, Chung Shan Medical University Comments to the Author:

Dear prof. SC Chen, we sincerely thank you for all useful and important comments to our manuscript, which we have considered carefully, and appreciate that you have taken time to help us in further improving our manuscript. Below we have answered each of your comments:

(1) Please describe the definite study period rather than "the spring of 2020" in the abstract and in the methods section.

We have changed the sentence to address specific dates rather than "spring" in the abstract and in the methods section.

(2) In the abstract, please describe the number of dispatchers (including the number of nurses, emergency medical technicians, and paramedics) who participated in the present study.

We have added the total participant number in the abstract.

(3) In the abstract, please describe the number of dispatchers in the three main themes separately. According to the method we have used for this study, all interviews and the data derived from the interviews were assembled in the analyzes and followingly all themes of the results.

(4) Please provide the information (data being expressed as the number with percentage or mean ± SD with range) including age, sex, job, seniority, educational level, and the number of using video streaming in medical emergency calls among the dispatchers, which giving readers a clear feature regarding these dispatchers.

We have added a table to the manuscript which contains information with an overview of number of years of experience in the EMCC and how often video had been used for each dispatcher. We have also added a sentence in the participants section of the methods chapter which states that all participants are either registered nurses or EMTs. When conducting the interviews, we chose not to collect information on each participant's education. This was done to avoid any recognition. When invited, the participants were told that no recognizable data would be published, and we feared that presenting education together with sex and number of years working in the EMCC could be unfortunate.

(5) Please describe the contents (including courses and credit hours) of the educational program for these dispatchers concisely in a table.

We have added a sentence about the educational program in the second paragraph of the study setting section in the methods chapter.

(6) What were the contents of the video streaming technology? Please briefly describe it.

The service is activated through the browser on the caller's smartphone. The client establishes a connection with application server, by safe connections using TLS until connection with server. The application handles the caller's flow to the web solution as well as display in browser for the dispatcher.

We have chosen not to describe the technology in the manuscript. This is because different video solution systems are used in Norway at present, even though the two EMCCs participating in this study used the same video solution system when the study was conducted.

(7) Did the two EMCCs have the same video streaming technology? Please clarify it.

We have added a sentence clarifying this under the section study setting in the methods chapter.

(8) How much image resolution was enough for the smartphones in the present study?

As long as the caller has internet connection for data transfer, video streaming will be conducted regardless of image resolution.

(9) In the results section, please provide the number of dispatchers (including the number of nurses, emergency medical technicians or paramedics) in the findings rather than "most", "several", "some", or "a few". The authors should put the main themes and their meaning units with the corresponding number of dispatchers (including the number of nurses, emergency medical technicians or paramedics) in a table (or tables). Please revise them.

In accordance with our chosen method and readability, systematic text condensation, we have chosen to describe the results more generally than with numbers. We appreciate the idea of a table for the meaning units. However, this is not considered a norm when using systematic text condensation, which is why we have chosen not to include such a table.

(10) Were there differences in the main themes and their meaning units among nurses, emergency medical technicians and paramedics? Please explain it.

We agree with this comment that this would be useful and interesting information. However, as

mentioned in a comment above, we chose not the collect information on each participant's education to avoid any recognition. This was done because we wished for the participants to talk as freely as possible in the group.

(11) Because this study was limited by its qualitative design, the subjective perceptions in the findings cannot show some cause-effect conclusion. Moreover, the present study cannot clarify the association between the baseline characteristics of dispatchers and the main themes. Please revise the limitations.

We have added a paragraph at the end of strengths and limitations clarifying limitations of a qualitative study.

(12) The description of "The use of video streaming in medical emergency calls might contribute to a better comprehension of the situation and more precise resource allocation, as well as improved experience of the call for both the dispatcher and the caller" is not appropriate for the conclusion.

Based on these subjective perceptions of the dispatchers in the findings, these dispatchers may feel a better comprehension of the situation, a more precise resource allocation, and an improved experience of the call for both the dispatcher and the caller when using video streaming in medical emergency calls. Please revise the conclusion.

We agree and have revised the conclusion ("Several of them also experienced (…) resource allocation" (..) an improved experience of the medical emergency call), as well as the conclusion in the abstract ("The dispatchers experience that (…) improved relationship between the dispatcher and the caller"..) (The dispatchers experienced that (…) followingly more precise resource allocation").

Reviewer: 3

Dr. Paul-Georges Reuter, SAMU 93

Comments to the Author:

Reviewing of: "From hearing to seeing: Medical dispatchers' experience with use of video streaming

in medical emergency calls: a qualitative study" by Idland et al..

Thank you for this opportunity of reviewing. The authors conducted a qualitative analysis of how dispatchers working in EMCCs feel about the use of video. This study is very much in line with the increasing use of video. I declare a conflict of interest here because the EMCC I work in uses video and I am a believer.

Dear Dr. Reuter, thank you very much for spending your time in order to help us to further improve our manuscript. We have found your comments very useful, and have answered each of them below:

It is possible to add this reference, from another French team:

Pineau G, Jenvrin J, Péré M, Penverne Y, Montassier E, Martinage A. Videoconferencing in the emergency medical dispatch center: A pilot study. Am J Emerg Med. mars 2021;41:257-8. Thank you for making us aware of this reference, we have added it in our manuscript.

Method:

The occupation of the participants is unclear in the manuscript. Are they doctors, nurses and paramedics or only doctors? More generally, are call takers able to use video? In France, the video are for doctors.

We have described the occupation requirements for Norwegian dispatchers in the first paragraph under the study setting section in the methods chapter. We have clarified this somewhat by adding nurses and EMTs in the participants section of the abstract.

The authors have used a qualitative method, which is necessary to answer their question. I am not an expert in the qualitative method. Does the methodology require a calculation of the number of subjects needed?

In qualitative methods, a calculation of a certain number of individuals is not performed in the same way as in quantitative methods. We conducted a number of interviews, and we finalized when we realized that we had enough data to answer our research question and had attained sufficient information to enlighten our themes in the interview guide.

Some results are presented in the methodology. It would be relevant to describe the population in the results section.

According to the method we have used for this study, the population is most commonly described in the methods section. This is on the contrary to most quantitative methods.

Résultats

The results are reported in accordance with qualitative methods. I think it is necessary to describe the population in the first step.

According to the method we have used for this study, the population is most commonly described in the methods section, under data collection.

If several functions are represented in the participants (doctor, nurse, paramedic), were there any variations in feelings between functions?

We chose not the collect information on each participant's education to avoid any recognition of the individual participant. This was also done because we wished for them to talk as freely as possible in the group. We realize that we may have lost nuances because of this choice, and that it would be interesting to focus on this in a follow-up study.

Finally, authors reported a well-done study, on a topical subject and which concerns all the EMCCs worldwide. They can be congratulated for their work. I am curious to know their feelings, two years later.

Thank you very much, we also believe it would be interesting to conduct a follow-up study with participants who have used video streaming over a longer period of time.

Paul-Georges Reuter, MD, PhD

VERSION 2 – REVIEW

REVIEWER	Reuter, Paul-Georges SAMU 93, UF Recherche-Enseignement-Qualité

REVIEW RETURNED	19-Sep-2022

GENERAL COMMENTS	Thank you for the work you have done to improve the manuscript. This is an important and novel work, and I think this manuscript should move forward. English is not my first language but some parts of the manuscript might benefit from English proofreading if possible. Some suggestions and minor mistakes; Page 2. Results: The results are categorized into three themes: 1) Change in dispatcher's perception of the patient and the situation, 2) Reassurance for the dispatcher, 3) Worries about increased time consumption and the possibility of unpleasant images. Page 6. Table 1 summarizes the participants' experience with years worked in the EMCC and use of video streaming. Page 3. Delete"." After reference. [4-6].. Page 6. Delete "had". The criterion for participating was that the dispatchers had had the opportunity to use video. Page 5. Delete "to" before key and ad "in". We invited participants from two Norwegian EMCCs, in different parts of the country. Invitations were sent to the leaders and key personnel in the two EMCCs Page 14. Ad space. [2].Our duration[8].However [17].Increase Page 19. Ad "s". For questions about e.g. association or causality, studies with other research designs must be conducted.

REVIEWER	Chen, SC Chung Shan Medical University, Institute of Medicine & School of Medicine
REVIEW RETURNED	16-Aug-2022

GENERAL COMMENTS	(1) The authors should provide the information (data being expressed as the number with percentage or mean ± SD with range) including age, sex, job, seniority, educational level, and the number of using video streaming in medical emergency calls among the dispatchers, which can give readers a clear feature regarding the baseline characteristics of the dispatchers. The descriptive statistics of the data (data is expressed as the number with percentage or mean ± SD with range) in participants did not reveal personal information about any individual when the data were anonymized, double-coded and de-linked. The authors can put the data in the online supplemental material without detriment to systematic text condensation. (2) The authors should place the data regarding the main themes and their meaning units with the corresponding number of dispatchers (including the number of nurses, emergency medical technicians, or paramedics) in the online supplemental material, which can make the relevant information clear and easy for readers to understand without detriment to systematic text condensation. (3) Readers may be interested in the differences in the main themes and their meaning units among nurses, emergency medical

	technicians, and paramedics. These data revealed the group characteristics rather than the individual information via an anonymized, double-coded and de-linked fashion. The authors can put the data in either the main text or the online supplemental material.

REVIEWER	Reuter, Paul-Georges SAMU 93, UF Recherche-Enseignement-Qualité
REVIEW RETURNED	03-Aug-2022

GENERAL COMMENTS	Thanks to the authors for their replies and modifications. The text is, to my opinion, suitable for publication.

VERSION 2 – AUTHOR RESPONSE

We wish to thank reviewer 1, Dr. Linderoth, for valuable comments throughout this process, and for your opinion that the manuscript should move forward! Thank you for corrections and language suggestions. We have corrected the mistakes you have pointed out.

Thank you, Dr Reuter, reviewer 3, for believing the text is suitable for publication. Thank you for valuable comments during the review.

We also wish to thank Professor Chen, reviewer 2, for valuable comments throughout the review process. We hope our answers can clarify the remaining issues, keeping in mind that the methodology of focus group interviews has its strength in teasing out the variety and breadth of experiences and opinions by resource effective research process, but at the cost of not knowing exact origins of these within the group.

(1) The authors should provide the information (data being expressed as the number with percentage or mean ± SD with range) including age, sex, job, seniority, educational level, and the number of using video streaming in medical emergency calls among the dispatchers, which can give readers a clear feature regarding the baseline characteristics of the dispatchers. The descriptive statistics of the data (data is expressed as the number with percentage or mean ± SD with range) in participants did not reveal personal information about any individual when the data were anonymized, double-coded and de-linked. The authors can put the data in the online supplemental material without detriment to systematic text condensation.

Thank you for your suggestion. We have revised table 1 with the aim of summarizing the characteristics of the participants more clearly. We chose not to collect individual educational background of the participants for this study. After consultation with the participants, we felt that this increased their trust in us to speak freely without any chance of recognition.

(2) The authors should place the data regarding the main themes and their meaning units with the corresponding number of dispatchers (including the number of nurses, emergency medical technicians, or paramedics) in the online supplemental material, which can make the relevant information clear and easy for readers to understand without detriment to systematic text condensation.

Thank you for suggesting this. We have added a table to the manuscript's additional files, with an overview of code groups, sub-groups and final themes. We are not able to associate individual themes and meaning units with education (see above) or number of participants expressing them

(3) Readers may be interested in the differences in the main themes and their meaning units among nurses, emergency medical technicians, and paramedics. These data revealed the group characteristics rather than the individual information via an anonymized, double-coded and de-linked fashion. The authors can put the data in either the main text or the online supplemental material.

Thank you for your comment. However, because data was collected through focus groups, it would be problematic to link code groups to individuals. In focus group interviews data comes from plenary discussions within the groups, and we deliberately did not organize groups by professional background in order to achieve richer discussions.

VERSION 3 – REVIEW

REVIEWER	Chen, SC Chung Shan Medical University, Institute of Medicine & School of Medicine
REVIEW RETURNED	26-Oct-2022

GENERAL COMMENTS	Because the information including age, sex, job, seniority, educational level, and the number of using video streaming in medical emergency calls among the dispatchers, as well as the data regarding the main themes and their meaning units with the corresponding number of dispatchers (including the number of nurses, emergency medical technicians or paramedics) were unavailable, the study cannot reveal the baseline characteristics of the dispatchers and the comparison of in the main themes and their meaning units among the dispatchers. Please state the weakness of the study in the strengths and limitations section.

VERSION 3 – AUTHOR RESPONSE

We wish to thank Professor Chen, reviewer 2, for valuable comments in the most recent review as well as throughout the total review process. We have added a sentence in the last paragraph of "strengths and limitations" in the discussion as your comment suggested, page 15/16.