Dear Editors,

RE: Revision of # BMJ-2018-047774 "Responding to mass casualty terror attacks in UK mental health services: How have things changed since the 2005 London bombings? A comparison of the NHS mental health responses to the terrorist attacks on the London (2005) and Manchester (2017), identifying service developments and ongoing barriers that urgently need addressing"

We are grateful for the opportunity to revise and resubmit the above Analysis article, now titled: "Responding to mental health needs after mass casualty terror attacks: Serious problems identified after the 2005 London Bombings still remain". The feedback indicated that the original paper was of interest to a broad readership, but that it focused too much on descriptive information about our experience, and should have included more international literature, as well as being accessible to a non-UK readership. It also needed to be more clearly structured around the central argument. We believe we have now addressed these issues in our revision, and we have responded to the individual comments below.

Reviewer: 1

> *Comments:*
> *Mass violence incidents including terrorist attacks appear to be occurring with increasing frequency, and they pose challenges to healthcare and mental health care providers and systems as well as to the communities in which they occur. This paper is difficult to evaluate on some levels because it is not a research paper per se but more of a "think piece" paper that describes two mass violent incidents, the responses to each, makes comparisons about differences in response to the second vs the first, and continuing barriers to providing mental and other healthcare services to victims and survivors of mass violence incidents. The paper is timely and contains some useful information, and the series of actions the authors identify on page 5 of the manuscript are quite valuable. However, the paper would be improved substantially by a revision that addresses the following issues.*
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> *First, there is insufficient conceptual structure and organization to assist the reader in putting the response to these two mass violence incidents into proper perspective. It be helpful to have it bit more discussion of what an adequate mental health response to mass violence incidents might look like and how this response might vary depending on characteristics of the incident or victims affected (e.g. those that involve criminal justice system activity due to survival are the perpetrator versus those that do not; age range of victims and survivors; whether most victims and survivors live near the location where the incident occurred versus those that are dispersed geographically and will require long-term follow-up services in multiple locations). The point needs to be made that the characteristics of the incident itself need to be analyzed carefully in order to determine what victim needs are likely to be and that the service delivery system will have to be adjusted based on this information. For example, cases in which perpetrators survive frequently involve protracted criminal justice system procedures that require special assistance to victims throughout this long process, highlighting the importance of partnerships with criminal justice system agencies to ensure that evidence-based, victim-centric planning and assistance is available at all stages. If incidents occur at concerts, sporting events, etc., it is likely that many if not most victims and survivors will not live near where the incident occurred, so provisions must be in place to provide services to victims who are geographically dispersed.*
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> *Second once this framework of best practices and needs has been described, the two mass violence incidents described in the paper can be compared to this template, which will*

facilitate the reader being able to determine the adequacy of response to each one and the extent to which the response to the second incident improved on the response to the first incident.

Third, an alternative way of organizing the paper would be the following. Start with an overview of policies, procedures, or best practices that were in place prior to the 2005 incident. Next, describe what was done and learned on the basis of response to that incident. Next, describe policies/procedures/best practices recommendations that were made based on experience with the 2005 incident. Two documents were mentioned in the paper that appeared to have such recommendations, and it would be helpful to include more information about these. Next, describe what was done in response to the 2017 incident but also make clear which of the previous recommendations were either not in place or could not be implemented in the 2017 incident. Finally, conclude with the analysis of what old recommendations still need to be implemented and what new recommendations should be added based on experience with the 2017 incident.

Third, it would be helpful for readers who are not familiar with the UK health system for the authors to provide a bit more information/explanation about the system and terms that are specific to it. Similarly, the section starting at the bottom of page 2 describing failure to share data because of concerns raised by the data protection act is not clear. It is unclear whether the authors believe that data were not shared enough, were shared too much, or some combination of the two. More information about this would be helpful. I also think it would be helpful to provide a bit more information about the Manchester Resilience Hub. What is it? What is that supposed to do? What services does it provide? How is it organized?

In summary, this paper provides some valuable information, but it could be strengthened substantially by a revision that addresses these issues.

We would like to thank Professor Kilpatrick for these extremely helpful suggestions as to how to better structure the paper in order to effectively contextualise the London 2005 and Manchester 2017 responses. We agree that outlining a framework of best practice against which to evaluate the subsequent response outlines is a more effective way of introducing the paper.

We have reorganised the paper as follows. We begin according to Professor Kilpatrick's first suggestion, giving an overview of factors that the design of a mental health response should take into account according to the nature of the terrorist event, including the characteristics of the population affected, including geographical spread and demographics, and any ongoing criminal, legal and memorial processes that may create additional support needs. We then detail the organisational challenges that should be negotiated in order to provide an adequate mental health response, such as specifying an organisational lead, coordinating the response across different agencies and organisations, data sharing, and setting up the means for mental health assessment. With respect to these criteria, we then outline the London 2005 mental health response and its limitations, followed by outlines of the responses to other terrorist attacks, and their limitations, including: Oslo and on Utøya Island (2011); Paris (2015); the UK screen-and-treat programme set up in response to the 2015 Paris, Tunisia, and Brussels attacks; and Manchester (2017). The paper concludes with a summary of which barriers still remain, and a series of recommendations for how to address these challenges.

In response to Professor Kilpatrick's third point, we have tried to either remove or explain UK health system-specific terms in order to make the paper more accessible to an international audience. We have also clarified that initially data were not sufficiently shared between agencies, and that this

process was both difficult and delayed. Within the limited space available we have tried to better explain the purpose of the Resilience Hub and how it works, and how it compares with the best practice framework.

Reviewer: 2

This paper compares the NHS mental health responses to the terrorist attack in London in 2005 to the more recent outreach program implemented in Manchester in 2017 and identifies developments and barriers in providing adequate services.

The authors point at extremely important challenges in responding to terror attacks in modern societies across the world. The identified ongoing barriers in England are equivalent to challenges in European societies and I recommend the paper to be accepted in BMJ to inform clinicians, researchers, decision makers and authorities.

The paper is well structured and easy to read and understand.

1. Introduction:
After describing the two terror attack events in the UK, the authors sum up possible impacts of terror attacks as follows:
"The majority of people may experience short-term distress, but generally cope well, however, some may have more persistent distress, and a sizeable minority may develop difficulties consistent with psychiatric diagnoses.(4,6) The latter is particularly common for people with past mental health difficulties.(4)"
Ref:
4. NHS. NHS Emergency Planning Guidance: Planning for the psychosocial and mental health care of people affected by major incidents and disasters: Interim national strategic guidance 30-7-2009.DH. 2009;95.
6. NATO Joint Medical Committee. Psychosocial care for people affected by disasters and major incidents. 2008;0–139.

In a scientific paper I would prefer references from original sources in regard to these estimates, and preferably from studies on populations being exposed to terror attacks or comparable events. The event in Manchester comprised of 27% children and young adults, so this could also be considered in choosing sources.

I agree with the authors that some studies have concluded that past mental health difficulties predict development of psychiatric diagnoses in disaster survivors, but the evidence of this statement in young terror survivors is questionable. At least, the authors should refer to original research papers making the sources of evidence more accessible to the readers.

Firstly, we would like to thank Professor Dyb for her comments. These statements about potential impacts have now been removed in order to make space for more detailed international comparisons. We acknowledge that the use of original sources is preferable, and have updated our citations accordingly. However, the BMJ Analysis article format has restricted our ability to do this because of the upper limit of 20 references.

2. The London Bombing and the Manchester Arena 2017 attack I am well familiar with the outreach program implemented after the London Bombing in 2005. This work set new standards for planning and implementing support and health services to exposed populations

after terror attacks across Europe. Unfortunately, terrorist attacks account for increasing and substantial numbers of deaths and disability. Also, European societies are experiencing a dramatic and continuing increase in number and catchment of terrorist attacks and related deaths, accompanied by a substantial increase of terrorism-related costs. This trend is expected to continue as home-grown right-wing and jihadist extremists, lone-wolfs, and returned foreign fighters from conflict zones are considered to pose a substantial security threat in Europe in the years to come.
Hence, European societies need to raise their standards on how to identify victims and reach out to affected populations. In this paper the authors both demonstrate what has been implemented since 2005 and important issues that are still unsolved.

Regarding the description of the Manchester Arena 2017 attack, I have the following comments;

1. *Being a non-UK reader, I have some difficulties understanding the health care system in the UK and what exactly "Strategic clinical network" and "Improving Access to Psychological Therapies" actually means. Please describe for international readers.*
2.

We apologise for the inaccessibility of these phrases for an international audience; we have now either removed or explained UK-specific terms.

3. *The authors describe tremendous efforts made to identify victims for registration in a database. Still, I understand that only 3200 persons were identified compared to 19 500 persons present at the attack. This demonstrates the need for improvements. Do the authors through their work see unused potentials for identifying affected citizens, e.g. by mobile phone or other measures?*

We acknowledge that the Hub has only engaged approximately 18.6% of those affected by the attack, and that this certainly demonstrates the need for better identification of those affected and of subsequent methods of outreach. We have now acknowledged this in the paper and propose that a comprehensive, centralised register of those affected, gathered immediately after the attack, would greatly improve subsequent outreach attempts. In Manchester we initially only had access to email addresses via the concert ticket company, but have also used mobile phone texts to remind people to re-complete screening measures with some success. Due to limited word count in the paper we have not expanded upon these issues, but have highlighted the need for a centralised register and the potential use of more innovative outreach methods.

4. *Line 50-54 on page 3: I understand the hub got responses based on their needs. Can the author describe in more detail what kind of responses this was and how they selected out those in need of more than automatic email responses? Referrals were made to evidence-based services close to where they lived. How do the authors know that the services provided evidence based services - also to children and young adults in the population? Please make a reference to evidence of the statement that the access to evidence based therapy has vastly improved since 2005.*

We have now briefly described in the paper how the Hub identified people who may been in need of more support; this triage was conducted using the established clinical cut-offs for each questionnaire used on the online screening tool. Hub clinicians make the vast majority of its referrals to NHS mental health services, which deliver evidence-based psychological therapies recommended

by the NHS National Institute for Health and Care Excellence (NICE). Where the Hub refers to non-NHS therapy providers, Hub clinicians ensure that they refer people to accredited practitioners in NICE-recommended therapies, such as Eye Movement Desensitization and Reprocessing therapy (EMDR). Unfortunately due to the 2000-word limit we have not been able to describe this within the text, but have tried to briefly clarify the statement and have provided a reference for the NICE guidelines for the treatment of psychological trauma. Although we still believe that access to evidence-based therapy has improved since the development of NHS 'Improving Access to Psychological Therapies' (IAPT) mental health services (see https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(19)30040-9/fulltext) in this revised version we have focused more on the developments made in disaster specific responses rather than mental health in general, and on the fact that challenges still remain, therefore have removed this statement.

> *3. Barriers and addressing challenges*
> *The first barriers to care for civilians being hit by terror and suffering from posttraumatic stress reactions are distressing reading; funding and identifying suffers. These are barriers for politicians and other authorities to address and solve, and I complement the authors for addressing these issues.*
> *These barriers needs to be solved to succeed in implementing outreach programs and provide adequate services.*
> *Implementing care pathways for all victims, regardless of age or where they live, and designed for the specific events, is challenging. To continuously update our knowledge on the potential psychosocial, mental and somatic impact of these events, more documentation is needed, both from outreach programs and clinical experiences and from rigorous research studies. This paper addresses important issues in these ongoing challenges.*

We would like to thank Professor Dyb for these generous comments; we agree that frequently these barriers are situated more widely than in clinical and research communities, and feel that it is important that these issues continue to be raised until they are addressed. Researchers and clinicians have much work to do in contributing to the evidence base in this area.

> *4. Suggested addition sources*
> *From the terror attack in Oslo, I allow myself to recommend the authors to look into the experiences made from the 2011 outreach program in Norway, as this may be useful additional knowledge.*

We are very grateful for the references provided by Professor Dyb, and have now included an outline of the experiences of the 2011 outreach program in Norway.

> *Reviewer: 3*
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> *Comments:*
> *This paper explains the mental health responses to the two major incidents in UK and discusses about their differences and the challenges extracted from them. These challenges are common in disaster mental health responses also in the other countries and important to be shared widely in an academic field.*
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> *Minor comments*
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> *Key message 1 seems overstatement. This paper discusses about the differences in the mental health responses following the two major incidents. The differences mentioned in the*

paper were mainly stem from the differences in the two incident characteristics. The responses to the 2017 attack was not necessarily "improved". If there are any concrete "development" or "improvement" in disaster mental health responses in UK since 2005, please explain it.

Dr Fukosawa makes a fair comment about the differences in response being due to the incident characteristics. We have therefore omitted this claim and focused on clear developments in the awareness of the need for mental health care following terror attacks, and on the development of screen-and-treat services as a potentially useful response that requires further research.

Please explain about "IAPT" briefly in the text (p3, l51).

In the text, "596 adults returned at least one questionnaire" (p2, l47), but the corresponding number in Table 1 was 565. Why?

We have now removed the above references from the revised draft.

We hope that the editors feel our revised Analysis article includes a more internationally focused account of the research literature, as well as developing a clear argument about the current barriers to mounting an effective mental health response. Although these barriers are described in a UK context they will be relevant to the vast majority of other countries, who also struggle with issues of funding, data sharing, information management, and setting up effective care pathways following major incidents. As such, we hope it will be suitable for publication in the BMJ.

Yours sincerely,

Dr Kate Allsopp (on behalf of all authors)