Author's response to reviews

Title: Treatment and outcomes of crisis resolution teams: a prospective multicentre study

Authors:

Nina Hasselberg Mrs (nina.hasselberg@ahus.no)
Rolf W Gråwe Mr (rolf.w.grawe@rus-midt.no)
Sonia Johnson Mrs (s.johnson@ucl.ac.uk)
Torleif Ruud Mr (torleif.ruud@ahus.no)

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Author's response to reviews: see over
Cover letter:

A point-by-point response to the concerns:

Dear Prof Pim Cuijpers,

Thank you for the peer reviews of our manuscript. The manuscript has now been revised according to the responses from the reviewers. In the subsequent text, we give a point-by-point response to the concerns of the reviewers. We have also highlight with underlines and highlighted text all changes made in the revised the manuscript.

Best regards,

Nina Hasselberg
Reviewer 1: Mary-Anne Cotton

1. Discretionary revision – As there is so much missing data with regard to diagnosis I might be inclined to play this area down explaining that there was insufficient data and just use the HoNOS data.

We have deleted the following sentence from the paper, method, data analysis section:
“There was no significant difference between patients with or without a diagnosis on the sum scales for HoNOS scores, or on the GAF symptom or functioning scores.”
Apart from this, the diagnoses data have not been included in any statistical analysis or tables. We have just used the HoNOS and the GAF data though the entire paper.

2. Discretionary revision – One of the conclusions is that the Norway teams seem to deal with patients with less server mental illness compared with the UK. Relevant papers are cited but it would be more thorough to also include some figures to compare with.

In the discussion, outcomes of crisis section, we have added:
However, patients with severe mental illnesses were not common in our sample compared with studies in the UK. “In studies of home-care acute psychiatric treatment based on data collected before the government proposed the establishment of nationwide CRTs in the UK, it was found that 53 – 62 % of the patients had psychotic disorders [38-41]. In Johnson’s two samples from 2005 37 % and 40 % had a psychotic disorder [8,9]. But the evidence is not wholly consistent; In a study of Barker et al from Edinburgh they found that 17 % of the patients had psychotic symptoms [13]) and Tacchi found 13.5 % with psychosis in a home treatment emergency response service in Newcastle [37].”

Further, to meet this concern, we have also made a small change in the conclusion in the abstract:
“Our study indicates that, compared with the UK, the Norwegian CRTs provided less intensive and less out-of-office care. The Norwegian CRTs worked more with depression and suicidal crises than with psychoses.”
Reviewer 2: Tanya Nelson

Discretionary revision

1. In the last para of the conclusions of the abstract the word ambulatory could be replaced with ‘face to face’ treatments or ‘face to face home’ treatments, to make the sentence more specific.

To meet this input from the reviewer we have changed the conclusion of the abstract to: “To be an alternative to hospital admission, the Norwegian CRTs need to intensify their treatment and meet more patients outside the office”.

The word ‘ambulatory’ was changed to ‘outside the office’ because this is the word we have used elsewhere in the paper. We choose not to use ‘face to face’ treatments because this term is hard to differentiate from outpatient treatments in the office. We did not want not to use ‘face to face home’ treatments either, because we do not only think of home treatment but all out-of-office contact.

2. Was one of the aims to compare Norwegian CRTs with UK teams? As it is mentioned in the conclusions of the Abstract, it might be worthwhile mentioning in the aims.

We have added one aim in the end of the background section: “4) where possible, compare Norwegian data with data from the UK”.

3. a) Was struck that the teams were set up in Norway with little emphasis on gatekeeping hospital admission, few with psychiatrists and most teams did not meet the CRT model as described by the PIG in the UK (such as targeting patients with SMI), which they based their service implementation upon. It is known that the closer one adheres to the model described, the more effective the crisis team (Glover et al Onyett et al). I see that you have discussed this extensively in your paper ‘An implementation study of the crisis resolution team model in Norway: Are the crisis resolution teams fulfilling their role?’ I think it would complete the background to refer to this paper to acknowledge that this issue had been considered. Although it is not exact scope of the paper, it is a related issue.
As the reviewer write, we have referred to findings and figures from our paper ‘An implementation study of the crisis resolution team model in Norway: Are the crisis resolution teams fulfilling their role?’ in the methods section of this paper:

“In 2005, there were nine CRTs for adults in Norway, and eight of these teams participated in this study. The last CRT did not participate because it was undertaking a study of its own [23]. The target group of the CRTs was intended to be patients with mental health problems so severe and acute that without the involvement of a CRT, acute admission would usually be necessary [7]. The CRTs in this study were from all parts of Norway, varying from urban to rural areas, with catchment areas ranging from 65,000 to 115,000 inhabitants. They consisted of 4–19 team members, and the teams were multidisciplinary (mainly psychiatrists, psychologists, psychiatric nurses, and social workers). Three had a psychiatrist and six had a psychologist as a full-time member of the team. The intended response time was 12–48 hours and the intended length of treatment by these teams was between five consultations and eight weeks. The CRTs were similar in that they were not available 24/7, played no gate-keeping role for acute psychiatric wards, and treated patients who were not considered for hospital admission. There were variations between the CRTs in their opening hours, their authority to admit patients to acute in-patient wards, and their ability to facilitate early discharge from acute wards. The most usual referral routes to the CRTs were self-referral, and referral by GPs, CMHCs, primary care mental health teams, and casualty departments.

Sample

In this multicentre study, the sample consisted of 680 patients and 62 staff members of eight CRTs. All patients referred during a three-month period, aged 18 years or more, and having face-to-face consultations with the CRTs were included in the study. There were no exclusion criteria.

Further patient and team characteristics have been presented in a previous paper [24].”
“In an implementation study of the crisis resolution team model in Norway, it was found that the CRT model has been implemented in Norway without a rapid response, gatekeeping function and 24/7 availability [24].”

b) Have they made an impact on other parts of mental health services, such as inpatient admission and decreased pressure on outpatients? One would not think so given the configuration and remit of the teams.

We do not have data on whether the introduction of CRTs has had an impact on hospital admission and to our knowledge there exist no such data in Norway. The main reason why we can not report data on hospital admission is that the acute psychiatric inwards have a larger catchment area than the CRTs. This means that the acute psychiatric inwards admit patients from areas both with CRTs and without CRTs. We were not allowed from the Norwegian Data Inspectorate to collect data on the municipalities in which the patients lived and therefore we could not differentiate the admission data related to catchment areas with and without CRTs.

4. One of your conclusions from the 2005 data is that there needs to be more home treatment, yet you say in the setting section that there are indications of more home treatment occurring from the survey in 2010 (your ref 22), indicating that this is actually happening. Perhaps there could be a suggestion that a re-survey should take place.

In the discussion section, content of treatment, we have added:

“There might have been some changes related to home treatment since this study; the telephone survey mentioned in the setting section of this paper indicating more home treatments occurring in the Norwegian CRTs [22]. We suggest future studies should include measurement on actual home treatment frequency.”

5. By having the clinicians from the team collect the data is there some risk of observer bias, especially with respect to gathering HoNOS and GAF scales at initial assessments and discharge? You make mention of this in the discussion section.

In the discussion section, outcomes of crisis, we have added:
“By having the clinicians from the CRTs collect the data there is a risk of observer bias, especially with respect to rate HoNOS and GAF scales at initial assessment and discharge.”

6. **Reasonable approach to use an imputation model of missing values for the CRT that did not measure length of treatments. It was a shame that this data could not have been retrospectively collected if at all possible.**

We tried to collect the length of treatment data retrospectively from this team, but the project leader had left the team and nobody was able to find registered data.

7. **In the results section, sentence 4, term ‘involvement’ would benefit from some clarification as to what this consisted of. Although you do address this in greater detail in the discussion.**

We have elaborated the CPPS sub-scales more in the method section by adding this paragraph:

“The case management sub-scale measures whether the staff provide practical help to the patients, the out-of-office contact sub-scale measures to what degree the staff is working outside of the office, the medication emphasis sub-scale measures how much emphasis the team put on medication as a part of the treatment, the team model sub-scale measure whether more than one team member meet the patients, the family orientation sub-scale measures whether the team provide information or counselling for clients’ family and the involvement sub-scale measures whether the staff members find their work interesting and challenging”.

8. **The HoNOS and GAF scores all decreased by a statistically significant amount, could this be affected by an observer bias, as in point 5?**

Yes we agree on this consideration, and as mention in point 5, we have add:

“By having the clinicians from the CRTs collect the data there is a risk of observer bias, especially with respect to gathering HoNOS and GAF scales at initial assessment and discharge.”
9. **In the section predictors of a favourable outcome of crisis, again, an explanation of what is meant by a high degree of ‘involvement’ on the CPPS subscale would be benefit understanding of what involves.**

We refer to point 7 in this cover letter where we have shown that we have elaborated the CPPS subscales in the method section.

10. **There is some UK evidence to indicate that UK crisis teams differ in their patient caseload diagnostic composition. In Tacchi et al (2003) evaluation of an emergency response service, the reason for referral to the team was predominantly for depressed and suicidal patients rather than patients with severe mental illness.**

We have added the Tacchi reference in the discussion section:

“Tacchi found 13.5% with psychosis in a home treatment emergency response service in Newcastle [37].”

And the reference is added to the references section (number 37).

**Minor essential revisions:**

1) **In para 5 of the Measures subsection, there is a typographical error. In the last sentence it should read ‘registration form’ rather than ‘from’**

This typographical error is corrected.