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Crisis plans in a home treatment team before and after a quality improvement programme

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Aims and method To measure the take-up of formal crisis plans in a specialist home treatment team (HTT) serving an ethnically diverse urban population; and to implement a quality improvement programme and measure its impact on crisis plan completion. Two audits were completed of patients before and after the implementation of a quality improvement programme. Descriptive data are shown by ethnic group, by gender, and for people with multiple hospital admissions.

Results At baseline, 16.7% of patients at high risk of admission had an HTT crisis plan, compared with 26.7% of a comparison group. Only 23.1% of the crisis plans for patients with a history of frequent admission mentioned the prevention of future admissions. Crisis plan completion improved following the quality improvement programme, when 80.0% of discharges had an HTT crisis plan; of these, 73.0% mentioned admission prevention. In the follow-up audit, 22.7% of patients in the multiple admission group had been readmitted to hospital at least once. Crisis plan completion did not appear to differ by ethnic group or gender and did not appear to be related to hospital readmission.

Clinical implications Crisis plan completion improved with simple practical methods, but completion was unrelated to gender, ethnicity or later readmission.

Declaration of interest None.

Collaborative and person-centred crisis plans are part of mental health policy in the UK, but little work has investigated take-up of crisis plans or equity in their use by crisis resolution and home treatment teams (CRHTs). Crisis plans may be a useful tool in the prevention of future hospital admissions, and they are especially relevant for CRHTs that perform a central gatekeeping role for people at risk of admission to hospital. Previous evaluations of

crisis plan use in community mental health teams give mixed results about the impact on hospital admissions.[1,2] Additionally, there are no systematic processes or any widely accepted standards for training health and social care professionals to implement collaborative crisis plans in a way that authentically reflects service users' perspectives in routine care. For some groups, collaborative crisis plans may be an important complex intervention to reduce admissions to hospital and improve equity in care. There is evidence that migrants and people from ethnic minority groups, and men, are overrepresented among psychiatric in-patients, but the use of crisis plans among specific ethnic groups and based on gender is not well researched.[3]

This paper describes the use of crisis plans in a home treatment team (HTT) in Tower Hamlets, an ethnically and socially diverse inner London area, ranked third in England on the Index of Multiple Deprivation.[4]

We aimed to:

- determine the extent to which crisis plans were completed in routine care and whether content mentioned admission prevention;
- determine whether crisis plan completion differed by gender, by ethnic group, or for people with a history of repeated hospital admissions compared with those without repeated admissions;
- evaluate whether routine use of crisis plans was improved by increasing clinicians' awareness and knowledge of how to complete a collaborative crisis plan; thus we audited, applied a practice intervention, and completed the audit cycle.

Method

Audit cycle and information collected

The project used a pre-/post-audit evaluation with a non-randomised control group design. We reviewed HTT records from 1 December 2006 to 1 December 2007 to identify patients with a history of multiple hospital admission, defined as three or more previous admissions or a second admission within 4 months of the first admission. A comparison group of 31 patients, excluding those with a history of multiple admissions, was randomly selected from patients treated and discharged within a similar time period.

Audit information included patients' demographics, crisis plan presence at discharge, mention in the crisis plan of prevention of future admissions and involuntary admission, and whether the following forms of support were mentioned as part of future crisis plans: HTT, social networks, general practitioner (GP) and advance directive presence.

A second audit assessed all discharges during the period 1 September 2008 to 28 February 2009, 6 months after the implementation of the quality improvement programme. This audit of all patients treated and discharged from the HTT also identified a subsample of patients from the multiple admissions group readmitted to hospital.

Data sources

Information was available from HTT documentation and care programme approach (CPA) documentation, hand-written patients' notes and electronic healthcare records.

Quality improvement programme

A set of guidelines on collaborative and person-centred crisis plans was developed by senior nursing and social care staff in the HTT and disseminated to HTT staff. These explained the aims of crisis plans and how to develop person-centred crisis plans with patients and included prompt questions. The discharge documentation template was altered to include crisis planning prompts.

Institutional approvals

Approvals were given by East London Foundation Trust's ethics committee to confirm that the project, as a service evaluation, did not need research ethics approval.

Results

A total of 107 patients with a history of multiple admissions formed the group. Ten patients with missing documents (CPA, HTT) were excluded from all analyses, meaning 97 patients were eligible for the baseline audit. A further 19 patients from the multiple admissions group had missing HTT documents, leaving 78 patients who entered the audit.

Multiple admissions group crisis plans at baseline

Of the 78 patients entering the baseline audit with histories of multiple admission, 13 (16.7%) had a crisis plan recorded (Table 1). Of these 13 crisis plans, 3 plans (23.1%) explicitly mentioned the need to prevent future admission; 7 plans (53.8%) mentioned the HTT as part of the intervention in future crises; 3 plans (23.1%) mentioned social support; and 5 plans (38.5%) mentioned the patient's GP. None of the crisis plans mentioned advance directives or the prevention of involuntary admissions in the future. Given the few HTT crisis plans completed at baseline, a crisis plan was also considered if it was contained in other documents; 82 patients (84.5%) had a crisis plan and 20 of these (24.4%) mentioned prevention of future admission.

Comparison group crisis plan baseline audit

Of the 30 patients entering the audit of the baseline comparison group, 8 (26.7%) had an HTT crisis plan. Of these crisis plans, 1 plan (12.5%) explicitly mentioned the need to prevent future admission; 2 plans (25.0%) mentioned the HTT as part of the intervention in future crises; 1 plan (12.5%) mentioned social support; and 6 plans (75.0%) mentioned the patient's GP. None of the crisis plans mentioned advance directives or the prevention of involuntary admissions in the future.

When crisis plans in other documents were considered, 25 (80.6%) patients had a crisis plan. Six of these crisis plans (24.0%) mentioned prevention of future admission.

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Table 1 Home treatment team crisis plan presence before and after quality improvement programme across ethnic groups and genders

	Before		After
	Multiple admissions, *n*/*N* (%)	Comparison group, *n*/*N* (%)	All discharges, *n*/*N* (%)
White British	6/42 (14.3)	3/10 (30.0)	93/112 (83.4)
White other	1/8 (12.5)	1/1 (100.0)	14/20 (70.0)
Black or Black British	3/8 (37.5)	0/7 (0.0)	45/52 (86.5)
Asian or Asian British	3/19 (15.8)	3/10 (30.0)	87/114 (76.3)
Mixed	0/1 (0.0)	0/0	6/6 (100.0)
Chinese or other	0/0	0/1 (0.0)	8/13 (61.5)
Not stated	0/0	1/1 (100.0)	3/5 (60.0)
Male	4/35 (11.4)	5/13 (38.5)	117/149 (78.5)
Female	9/43 (20.9)	3/17 (17.6)	139/171 (81.2)
Total	13/78 (16.7)	8/30 (26.7)	256/320 (80.0)

Post-quality improvement programme crisis plans

The prospective audit of all discharges following the crisis plan work in the team showed greater crisis plan completion in HTT documents than both pre-quality improvement programme groups. Of 320 discharges entering the audit, 256 (80.0%) had a crisis plan. Of these crisis plans, 187 plans (73.0%) mentioned prevention of future admission; 188 plans (73.4%) mentioned HTT as an intervention; 187 plans (73.0%) mentioned social support; 221 plans (86.3%) mentioned the patient's GP; 3 plans (1.2%) mentioned an advance directive; and 27 plans (10.5%) mentioned prevention of future detention. Patients from Black or Black British ethnicities had the highest proportion of crisis plans compared with other groups (Table 1). The proportions of males and females with crisis plans were roughly equivalent.

Hospital readmission group at follow-up

By the follow-up period, 22 of 97 patients (22.7%) in the multiple admission group had been readmitted to hospital at least once (42.9% [18/42] White British; 12.5% [1/8] Black or Black British; 15.8% [3/19] Asian or Asian British; White other and Mixed groups are not presented, as no patients were readmitted). A higher proportion of men (27.9% [12/43]) than women (18.5% [10/54]) was readmitted. Crisis plans in any documentation were found among 86.4% (19/22) of patients readmitted compared with 84.0% (63/75) of patients not readmitted.

Discussion

The role of HTTs in crisis planning

The baseline audit demonstrated a lack of routine HTT crisis plan completion for a group of people at higher risk of hospital readmission. Audit of other documents found fewer missing data and greater completion, suggesting the challenge was in the documentation located within the HTT. Contrary to expectation, the comparison group demonstrated higher HTT crisis plan completion. Evaluation of crisis plans in other periodically completed documents did not demonstrate this trend. The timing of crisis plan completion may offer an explanation. When patients are discharged from an HTT and admitted to hospital, it is likely that they are not able to consider reviewing or rewriting a crisis plan. Additionally, it is more likely than not that they will return to the HTT once discharged from hospital. It is at that point when crisis planning is more appropriate. Hence, as the multiple admission group is more likely to contain patients at discharge who are admitted to hospital without a crisis plan compared with the comparison group, these discharges from the HTT are less likely to have a crisis plan.

Following the quality improvement programme, crisis plan completion improved, and crisis plans were more detailed and included admission prevention. Advance directives were still not used. If services are to support patients in relapse and admission prevention, the HTT is uniquely and critically placed to help patients revise their crisis plans and implement and communicate the plan to other teams.[5] This process may be easier for patients following a recent crisis, as this may facilitate more flexibility and a search for more effective personalised interventions by staff and patients.[6]

Crisis plan completion and readmission

Hospital admission results from complex events. Preventing admissions is unlikely to be reducible to the presence or absence of a simple written intervention such as a crisis plan. It is likely that variation in the intensity of the crisis planning process may account for the differences in previous findings of the relationship between crisis planning and admission prevention.[7] The quality improvement programme was designed to train staff and provide prompt questions to stimulate discussion with clients on preventing future relapse and admission. The degree to which effective crisis plans contribute to admission prevention and differences across ethnic groups in crisis plan completion can be investigated only by a large prospective randomised research study. In this audit, crisis plans appeared to be unrelated to gender or readmission.

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White British patients were at higher risk of readmission; reasons for this warrant further investigation.

Although prevention and early intervention clearly reduce the personal and economic costs of relapse and hospital admission, take-up of these kinds of intervention tend to be low. Our initial results are consistent with other findings that generally preventive strategies in health are underused and tend to be underused by particular groups, such as men and ethnic minority groups. This reluctance may be due to differences in help-seeking behaviours or stigma. Research into how these factors interact with crisis plan formulation and implementation, and how this affects subsequent hospital readmission for these groups, could suggest future avenues for collaborative HTT and CMHT intervention.

Limitations

Although our findings suggest improvement in crisis planning in an HTT setting, we cannot draw inferences because the multiple admission and comparison groups are not directly comparable with the post-quality improvement programme group. Additionally, this finding could be due to the Hawthorne effect as a result of changes to discharge documentation.

Written crisis plan presence is a proxy for the crisis planning process and does not necessarily reflect the quality or the relevance of the crisis plan. Effectiveness of the intervention in admission prevention also depends on implementation of the plan, an aspect that not many studies have addressed. Barriers to implementation lie both within healthcare structures and teams and within individuals.

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