

# Cognitive Behaviour Therapy for Psychosis in High Secure Services: An Exploratory Hermeneutic Review of the International Literature

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**Background:** Mainstream psychological interventions may need adaptation in High Secure (HS) healthcare contexts to enable better recovery, safeguard the public and offer economic value. One specific psychological intervention, cognitive behavioural therapy for psychosis (CBTp), has an already proven efficacy in aiding recovery in non-forensic populations, yet its impact in HS settings has received considerably less research attention. **Aims:** This exploratory review catalogues CBTp approaches used in HS hospitals and appraises impact through the inclusion of both fugitive literature and peer reviewed research. **Method:** A pragmatic approach was utilized through an iterative literature search strategy and hermeneutic source analysis of the identified studies. **Results:** Fourteen studies were identified from HS contexts from within the UK and internationally. These included group, individual therapy and CBTp linked milieus. **Conclusions:** CBTp is an active component of treatment in HS contexts. Some modes of delivery seem to have greater levels of efficacy with more typical HS patients. The literature indicates key differences between HS and non-HS applied CBTp. Continued application and evaluation of CBTp in HS conditions is warranted.

*Keywords:* Psychosis, high secure services, hermeneutics, literature review

## Introduction

High Secure (HS) healthcare facilities are tasked with safeguarding the public, promoting patient recovery and reducing risk of future harm (Tapp, Perkins, Warren, Fife-Schaw and Moore, 2013). Typically those admitted to such facilities are detained without limit of time, pending successful treatment and risk reduction (Great Britain, 1983, 2007). Context, legal status, offence related factors and poor treatment response support population specificity arguments (Bentall and Haddock, 2000). These often preclude the efficacious application of non-forensic-derived psychological intervention protocols (Nijman, De Kruyk and Van

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Nieuwenhuizen, 2004). Barriers relating to insight, psychological mindedness, adherence and complexity are particularly acute within HS contexts (Laithwaite et al., 2007). Per capita treatment costs are also amongst the highest in healthcare and prolonged detention periods diminish the likelihood of successful rehabilitation (Fineberg et al., 2013). Efficacious contextual and population specific adaptations are therefore essential to enable recovery, safeguard the public and offer value (Benn, 2002; Steel, 2008).

Non-forensic derived guidance stipulates that cognitive behavioural therapy should be routinely offered to people with a history or current experience of psychosis (National Institute for Health and Clinical Excellence (NICE), 2014). This approach has proven efficacy in non-forensic samples as an adjunct to pharmacological interventions (Burns, Erickson and Brenner, 2014; Wykes, Steel, Everitt and Tarrrier, 2008), and as an effective alternative (Morrison et al., 2014; National Collaborating Centre for Mental Health (NCCMH), 2014). At its core is the premise that cognitive behavioural techniques can effectively challenge psychotic content and enhance empowerment, thereby reducing distress (Morrison, Renton, Dunn, Williams and Bentall, 2004). As a result of wider guidance most HS hospitals include cognitive behavioural therapy for psychosis (CBTp) within their treatment options (Slater, Tapp, Dudley, Cooper and Cawthorne, 2014). Yet despite the related implications, little is known about the adaptations to CBTp the HS context necessitates, nor the derivation, application or effect of these (Laithwaite et al., 2009). Previous systematic literature searches using standard psychiatric and psychological databases with Cochrane search parameters have repeatedly failed to identify a significant body of HS CBTp research evidence (Laithwaite, 2010; Jones, Hacker, Cormac, Meaden and Irving, 2012; Tapp et al., 2013). We therefore hypothesized that an exploratory review that included fugitive literature might yield sufficient alternate studies to help inform discussion within the field and offer important insights (Pappas and Williams, 2011).

### **Aims**

This exploratory review aimed to identify CBTp approaches used in HS Hospitals and appraise impact. The objectives were fourfold:

1. To identify a wider body of HS CBTp studies;
2. To analyse the identified studies with regard to application, impact and value;
3. To offer a synthesized algorithm of HS CBTp intervention strategies according to perceived efficacy;
4. To compare HS practices with non-forensic derived CBTp guidance.

### **Method**

The review necessitated an innovative strategy to identify, appraise and analyse a wider body of HS CBTp literature than had previously been considered; i.e. one that included published peer and non-peer reviewed articles as well as unpublished local studies. This decision to include fugitive literature evolved from Dewey's pragmatist concept of research inquiry (Morgan, 2014). Dewey hypothesized that emotions drive and are the product of an ever evolving cycle of solution focused beliefs and subsequent actions. Through our own professional work we were aware of literature produced by experts in the field that

was not being identified through standardized search criteria. We believed that this body of work was worth reviewing in order to gain as complete a picture as possible of applied HS CBTP. Fugitive literature can be difficult to define, source and analyse. Concerns have been raised about rigour, standardization and lack of review (Mahood, Van Eerd and Irvin, 2014). Proponents argue inclusion can reduce “file draw” publication biases and enhance rigour, can uncover important perspectives that might otherwise be lost, and can offer insights that are more relevant to stakeholder concerns (Rosenthal, 1979). These differing considerations were borne in mind when we completed this review.

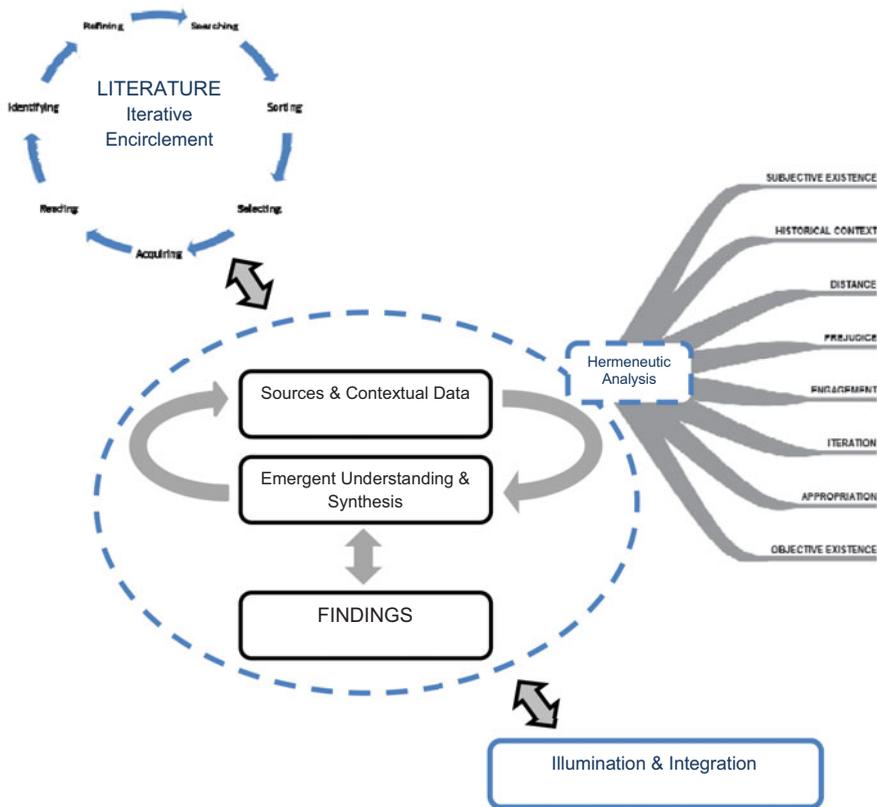
Due to its emergent status, strategies for identifying, interrogating and including fugitive literature within a review are underreported (Mahood, Van Eerd and Irvin, 2014). We therefore developed a novel strategy that combined iterative and hermeneutic processes. This approach offered greater flexibility whilst remaining sufficiently rigorous to allow a repeatable synthesis of the literature so as to inform discussion and offer new insights (Boell and Cecez-Kecmanovic, 2010).

Initially, the search process involved examining papers with which we were already familiar. We then checked the reference lists for further sources and contacted the authors of all the identified papers, asking them if they were aware of further research in the field. We asked if they had further contacts in the field who might have additional past or current research that met the search criteria. This process continued until we were certain we had exhausted all possible leads and sources of further literature. Inclusion criteria were initially kept as open as possible to ensure identification of all possible relevant literature. Sources that described HS CBTP interventions, but offered no evaluation, were subsequently excluded. No other exclusion criteria were applied. HS CBTP was defined as any CBT intervention (Curran, Houghton and Grant, 2010), applied to psychosis, in HS hospitals or their international equivalents.

A hermeneutic analysis of the identified studies was utilized on the grounds that it would facilitate a greater depth of understanding and a less opaque appraisal of a developing evidence base (Patterson and Williams, 2002). This approach asks the researcher to engage in a process of self-reflection on the literature. Specifically, the biases and assumptions of the researcher are not bracketed or set aside. Detached objectivity is not the goal as in more systematic review approaches, but rather the reviewer’s assumptions are embedded into the process and are seen as essential to an interpretive process (Lavery, 2003). The researcher gives consideration to their own experience, professional knowledge and makes explicitly clear the ways in which their position or experience relates to the issues being reviewed and is influencing their understandings, on an ongoing basis. The review process thus involves reading the literature, considering its content, context and the meanings generated. It involves asking further questions and necessitates a rereading of the paper from a new perspective to answer these further questions. This process is known as the hermeneutic cycle (Lavery, 2003). The overall study design and process is shown in [Figure 1](#).

## Results

The 14 sources identified through the iterative search strategy are provided in [Table 1](#). The sources indicate that a variety of CBTP interventions are provided internationally within HS hospital contexts. These are offered to recently admitted, medium dependency, rehabilitation and chronic long-term patients and include group and individual therapy



**Figure 1.** (Colour online) A summary and illustration of study method – based on and with elements adapted from Boell and Cecez-Kecmanovic (2010) and Patterson and Williams (2002)

and CBTp linked milieus. The chaotic spirals of encirclement from which meaning is derived within hermeneutic analysis have been condensed for the purposes of this paper and sources ordered according to mode. In order to encapsulate hermeneutic exploration and aid transparency, the authors' interpretation of each source is offered for scrutiny against the meanings original authors may have intended and those others may make (Patterson and Williams, 2002). Inferences for each mode are then extrapolated (Boxes 1–3) and the subsequent nascent appraisal is finally described.

### Group CBTp

*Interpretations.* Williams, Ferrito and Tapp (2014) used a controlled trial, between-subjects design to evaluate group CBTp at Broadmoor. Developed from a published treatment manual (Williams, 2004), the modular intervention adhered to NICE guidance (NICE, 2009). In a similar Dutch study, Hornsveld and Nijman (2005) used a between-subjects design to evaluate the impact of group CBTp, and in three further studies CBTp focused groups included a self-esteem group (Laithwaite et al., 2007), a compassion focused programme (Laithwaite et al.,

**Table 1.** Identified CBTp papers with High Secure Services

Study	Mode	Patient group	Delivery	Evaluation	Location	Publication status
Benn, 2002	Individual	-	Psychologist	Case series triangulation <i>n</i> =2	Rampton Hospital - UK	Published, not peer-reviewed
Bentall and Haddock, 2000	Individual	-	Psychologist	Case study triangulation <i>n</i> =1	Ashworth Hospital - UK	Published, not peer-reviewed
Cawthorne, 2003	Individual	-	Nurse therapist	Within-subjects analysis of pre and post measures <i>n</i> =5	The State Hospital Carstairs - UK	Fugitive - unpublished
Cooper 2009, 2010	Milieu	Medium dependency	Registered nurses	Questionnaire	Ashworth Hospital - UK	Fugitive - unpublished
Ewers, Leadley and Kinderman, 2000	Individual	-	Psychology and nursing	Case study triangulation <i>n</i> =1	-	Published, not peer-reviewed
Garrett and Lerman, 2007	Individual	Chronic long-stay	Psychology and nursing	Descriptive case series <i>n</i> =8	New York State Hospital - America	Published, peer-reviewed
Hornsveld and Nijman, 2005	Group	Post admission	-	Control Trial <i>n</i> =16	De Kijvelanden Hospital – Holland	Published, peer-reviewed
Rogers and Curran, 2004	Individual	-	Nurse therapist	Case study triangulation <i>n</i> =1	-	Published, not peer-reviewed
Laithwaite, 2007	Group	Pre-discharge	Psychology and nursing	Within-subjects analysis using outcome measures <i>n</i> =15	The State Hospital Carstairs	Published, peer-reviewed
Laithwaite, 2009	Group	Pre-discharge	Psychology and nursing	Within-subjects analysis using outcome measures <i>n</i> =18	The State Hospital Carstairs	Published, peer-reviewed
Slater, 2011	Individual	Post admission	Nursing	Case study triangulation <i>n</i> =1	Rampton Hospital - UK	Fugitive - unpublished
Savage, 2009	Milieu	Pre-discharge	Nursing	Case study triangulation <i>n</i> =1	Ashworth Hospital - UK	Published, peer-reviewed
Williams et al., 2014	Group	Pre-discharge	Psychology and nursing	Control Trial <i>n</i> =27	Broadmoor Hospital - UK	Published, peer-reviewed
Vallentine 2010	Group	Pre-discharge	Psychology and nursing	Mixed triangulation <i>n</i> =18	Broadmoor Hospital - UK	Published, peer-reviewed

**Table 2.** An interpretation of the identified group studies

Study	Method	Patient group	Delivery	Main results
Hornsveld and Nijman, 2005	Between subjects control trial ( $n=16$ participants, $n=16$ control group) based on a range of pre and post outcome intervention measures.	Post admission males with a diagnosis of chronic psychosis, recruited over 4 years from 4 cohorts with a low mean length of stay (1.7 years). Pre-group assessment means were below the average expected for the diagnostic category. The control group was recruited from patients who declined the group or were unable to access it.	Intensive, modularised group CBTp comprising of 3 x 1 hour engagement sessions involving the patient's family, 64 x 1½ hour group sessions focussed on acceptance, understanding, stress management and personal and social coping and an indeterminate number of one-to-one domestic and self-care skills training sessions. The profession of the facilitators was not stipulated.	Only improvements on the social skills and negative coping categories of the MI Scale (Brand et al., 1998) proved statistically significant ( $p < 0.05$ ). All other outcomes failed to achieve significance compared to the control. Of the 25 patients who started the group 9 (36%) dropped out as they found it too stressful or felt it did not meet their needs.
Laithewaite et al., 2007	A within-subjects ( $n=15$ ) repeat measures design using 3 self-esteem and 3 symptom focussed measures.	Male patients with a history of psychosis and a mean length of stay of 7 years. Of note was that general pre-group levels of esteem rated close to normal. Pre-group means for psychotic symptoms were below the norms expected for schizophrenia. Moderate levels of depression were detected.	A 10 session CBT group programme targeting self-esteem adapted from an acute inpatient 1:1 intervention (Hall and Tarrier, 2003). Delivered by a clinical and an assistant psychologist and a clinical nurse specialist (CBT).	Small but significant effects on esteem were observed on one measure ( $p < 0.05$ ) and observed but not maintained on another. Significant changes post group ( $p < 0.05$ ) were observed but not maintained for delusions and depression. No other significant changes were observed.

Table 2. Continued

Study	Method	Patient group	Delivery	Main results
Laithewaite et al., 2009	A within-subjects ( $n=18$ ) repeat measures design (pre, post and 6 week follow-up).	All male patients diagnosed with chronic psychotic disorders, 8 also had comorbid anti-social personality disorders. Pre-group assessment outcomes were indicative of psychosis symptom remission. Esteem was also within normal range and levels of depression were minimal.	Innovative group intervention using compassionate mind training to aid recovery. 20 group sessions focussed on understanding psychosis and recovery, understanding compassion, developing the ideal friend and developing plans for recovery after psychosis, facilitated by qualified, trainee and assistant psychologists with the aid of an advanced nurse practitioner.	Post intervention and at follow-up (6 weeks), low and moderate significant effects were observed for general psychopathology, depression, other as shamer, social comparison and esteem ( $p<0.01-0.05$ ). However, type 1 error cannot be excluded as adjustment was not made for multiple comparisons.
Williams et al., 2014	Waiting list control trial ( $n=27$ ), statistical analysis of a range of pre and post intervention outcome measures, iatrogenic effects were monitored.	All pre-discharge males with an average length of stay of 7.8 years, recruited from 4 cohorts over 4 years, with primary diagnoses of paranoid schizophrenia and index offences of murder or manslaughter.	Manual based (Williams, 2004) modular group CBTp delivered by nurses and psychologists over 70 sessions (35 x 1½ hour weekly sessions and 35 weekly individual supplementary sessions). Model fidelity was ensured and assessed via supervision.	No overall statistically significant changes were observed post-group on any of the measures for positive symptoms, large ( $\geq 0.8$ Cohen's $d$ ) statistically significant effects ( $p<0.05$ ) were observed for affective flattening, alogia and anhedonia. No significant iatrogenic effects were reported.

**Table 2.** Continued

Study	Method	Patient group	Delivery	Main results
Vallentine et al., 2010	A within-subjects ( $n=31$ ) repeat measures design. Indices of clinical and reliable significant change were calculated. Completer and non-completer data pertaining to risk incidents, medication, placement status and subsequent engagement in therapy groups during a 12 month follow up period was examined for difference. Completers were offered the opportunity to provide verbal feedback - 21 accepted.	All male patients with a history of psychosis. Mean length of stay was 6 years for completers ( $n=31$ ) and 9 years for non-completers ( $n=11$ ). Pre-group assessment outcomes were not within clinical range.	A 20 session CBT psycho-education group facilitated by nursing and psychology staff. Fidelity was ensured via supervision.	No significant change post-group was observed. The indices of change did, however suggest that clinical and reliable change had occurred across all component measures - albeit bidirectional. Positive reliable change was particularly evident for esteem. No significant differences in risk incidents or placement status were observed. Four dominant themes emerged from completer feedback: what participants valued; how the information helped; clinical implications; and what was unhelpful. Completers reported they had gained a sense of agency and increased understanding from attending the group and would recommend it to others.

**Box 1. Group inferences**

- Control trials for psychological therapies are possible within HS contexts
- Within-subjects study designs are more frequent
- Only one study adopted a mixed methodology
- Groups were modularized and designed to target all or specific psychosis experiences
- Groups for specific experiences were shorter and less intensive
- Individual sessions were needed to supplement group sessions
- Only one group format specifically involved families
- Groups were facilitated by specialist nursing staff alongside clinical, trainee and assistant psychologists
- Senior psychologists and protocol authors maintained model fidelity via supervision and involvement
- Only certain HS patients participate in group work
- Participants were recruited over a number of years, usually over a number of cohorts
- Participant numbers remained proportionately small with regard to statistical analysis.
- There were large differences in length of treatment between groups (10 – 70+ sessions) and in session composition
- Some studies also offered details of how confounds such as concurrent treatments, had been controlled
- Most participants had chronic psychotic disorders and index offences of manslaughter or murder
- Participants were male
- With the exception of the De Kijvelanden study, mean participant length of stay was similar to that expected for discharge to conditions of lower security.
- Non-participants/drop-outs had comparatively chronic (9+ years) or short (1.4 years) lengths of stay
- General pre-group levels of psychotic symptoms were low or remitted
- Levels of pre-group esteem were generally normal
- Moderate to severe levels of depression and anxiety were evident pre-group in some studies
- Statistical analysis of repeat measures was generally used to determine effect
- Only one measure, the MI-Scale, was specifically designed and validated for use with HS populations
- Little significant overall change occurred for positive symptoms
- Significance was achieved on some measure subscales relating to negative symptoms
- Potential significance (type 1 error withstanding) was observed on some depression and esteem measures.
- Potential iatrogenic effects were evident in three of the five studies.

2009), and a psycho-education intervention (Vallentine, Tapp, Dudley, Wilson and Moore, 2010). An interpretation of these studies with regard to method, patient group, mode of delivery and main results is offered in [Table 2](#). Subsequent inferences are shown in [Box 1](#).

*Appraisal.* Group CBTp interventions were largely based on non-forensic derived protocols with approach fidelity ensured through supervision and guidance from senior staff and manual authors. Little significant change was reported for positive symptom experiences. Outcome congruence and study rigour make this difficult to attribute to poor assessment design or context application. Similar effects were observed between scales with a high-degree of acceptability in HS contexts such as the MI-Scale (Brand, Diks, Vanemmerik and Raes, 1998) and CORE-OM (Perry, Barkham and Evans, 2013), and measures not validated for HS. The potential for psychometric assessments not to capture therapeutic change also seems doubtful given the congruency achieved between quantitative and qualitative data in the Vallentine et al. (2010) study.

Pre-group sample characteristics may offer the most viable explanation for limited effect. Across all studies pre-group outcomes were generally indicative of stability, symptom remission, and normal esteem affording the probability of only minor change (Laithwaite et al., 2007). HS Group CBTp studies failed to replicate the substantial effects achieved in similar protocol-based non-forensic studies where participants reported more severe pre-intervention symptom profiles (Hall and Tarrier, 2003). Indeed, HS non-participation was highest amongst those patient groups who were least likely to have experienced symptom remission, typically those with shorter (less than 2 years) and longer (9 years +) lengths of stay (Garrett and Lerman, 2007; Nijman et al., 2004). This may suggest that non-forensic patients with unremitted symptoms are more likely than their forensic counterparts to engage in and gain from group CBTp. Paradoxically, HS patients who are most likely to engage in group CBTp seem the least likely to need the intervention in order to meet symptom and adherence related conditions for discharge. One might therefore question the efficacy and ethicality of intensive global and specific CBTp group programmes targeted at remitted post-admission or pre-discharge HS patients, given the reported iatrogenic effects.

However, significant lasting changes in outcome measure subscales linked to negative symptom experiences did occur. Symptom experiences often deemed untreatable, such as affective flattening, alogia and anhedonia, significantly improved, as did social skills and linked aspects of self-esteem. Significant reductions in negative coping were also seen. Commendably, these changes were generally observed in trials with control groups. Aggregate means analysis (Field, 2000), high levels of co-morbid personality disorder (Hornsveld and Nijman, 2005) and medication-linked reduced social functioning (Vallentine et al., 2010) may also have masked further large individual improvements. Indices of change and qualitative data within the Vallentine et al. study also indicated that transient iatrogenic effects might be indicative of and important components within acceptance, insight development and positive change.

Conversely, results might also have been less significant than reported. Despite often amalgamating data from several cohorts over a number of years, subject numbers remained less than ideal for statistical analysis. Results were deemed preliminary (Williams et al., 2014). Corrections for multiple measures and comparisons were also absent and gender homogeneity precluded generalizability. As opposed to CBTp per se, observed effects might also have been due to group inclusion and enhanced opportunities to safely test and practise social skills. However, the inclusion of family members in the Hornsveld and Nijman (2005) study and the extended group duration in Laithwaite et al. (2009) to offer increased skills rehearsal, failed to produce unequivocal differences.

**Table 3.** An interpretation of the studies relating to therapeutic milieus

Study	Method	Patient group	Delivery	Main results
Cooper, 2009, 2010	Structured independent interviews were used to elicit feedback from patient and nurse participants. Interview transcripts were analysed for pertinent content.	Male patients on a medium dependency ward within a high secure context.	A 10 session ward CBAP training programme (based on Turkington et al., 2006) targeted at nursing staff was used to develop a modality specific milieu. Post training practice support to ensure fidelity and application was provided by a nurse therapist (CBT)	Training took considerably longer than envisaged – six months to deliver the 10-session schedule to six staff. Confounding factors included personal commitments, staffing levels, allocation and movement. Trainees' fed back a variety of clinical benefits, including increased quality of intervention and better working with patients previously considered difficult. Trainers and training schedule were rated favourably. Opinions of the ward as a training venue were mixed. Ward patients ( $n=5$ ) reported being well informed about CBAP. Equivocally some found the effect excellent whilst others were disappointed. All reported a satisfactory to good effect on CBAP helping them to achieve goals. Specific benefits included feeling more able to engage, better coping, reduced stress, more positive thinking and increased offence and psychosis related insight.
Savage, 2010	Single case description (Roy)	Male patients on a rehabilitation unit within a high secure context	The milieu was designed to aid readiness for discharge. Patients were exposed to a nursing team who had all received PSI and CRT training incorporating cognitive behavioural approaches for psychosis (CBAP). A supervisory and coaching network ensured ongoing fidelity and application. Patients were also offered CRT by qualified therapists.	Medication, psychological therapies and prior exposure to the therapeutic milieu, were credited for a significant reduction in high impact, high severity assaults linked to positive symptomology. Continuing low impact, low severity assaults, linked to dysexecutive syndrome, were mediated via CRT. Roy was subsequently considered suitable for referral to conditions of lesser security. Shaping and modelling calm pro-social behaviour, the inclusion of social problem solving and cue recognition and the use of over-learning to ingrain new behaviours, were considered key to the treatment effect.

**Box 2. Therapeutic milieu inferences**

- Training nursing staff is a viable means of developing CBTp linked ward milieus within rehabilitation and medium dependency HS contexts
- Investing in HS nursing staff to facilitate CBTp linked milieus is a cost effective means of implementing NICE guidance, meeting national nursing competency criteria and increasing the clinical efficacy of nursing interventions
- CBAP training can be delivered by suitably qualified nurse trainers
- CBAP and the maintenance of CBTp linked milieus can be effectively supervised via suitably qualified nurse therapists
- When offered by registered nurses, CBAP facilitates a number of clinical, nursing and organisational benefits
- CBTp linked ward milieus aid in the reduction of high impact high severity assaults and aid the efficacy of pharmacological interventions
- CRT in combination with a CBTp linked ward milieu can also reduce low impact low severity assaults and address deficits associated with dysexecutive syndrome
- Patients exposed to CBAP report a number of clinical benefits
- Evidence of impact remains anecdotal and derived from a limited number of cases ( $n=1$  and  $n=5$  respectively) - no statistical analysis of significance was reported
- The data is based on male patients only.

*Therapeutic milieu*

*Interpretation.* Two of the identified studies related to the development of modality specific ward milieus involving CBTp (Cooper, 2009; Savage, 2009). Savage (2009) described a rehabilitation unit at Ashworth Hospital that combined a psychosocial interventions (PSI) milieu (Savage and McKeown, 1997) and individualized Cognitive Rehabilitation Therapy programmes – CRT (Rogers, 2006) to aid readiness for discharge. Cooper (2009, 2010) developed and evaluated the impact of a modularized ward based Cognitive Behavioural Approaches for Psychosis (CBAP) training programme (Turkington et al., 2006) designed to aid individual nursing interventions and create a modality specific milieu on one of Ashworth Hospital's medium dependency wards. An interpretation of these studies with regard to method, patient group, mode of delivery and main results is offered in Table 3. Subsequent inferences are shown in Box 2.

*Appraisal.* The anecdotal evidence these studies report gives the impression that CBTp ward milieus are less intensive, less costly and possibly more effective than group CBTp at helping HS patients progress and rehabilitate. Patients reported better coping, engagement, insight and goal attainment. High impact, high severity assaults reduced and positive symptom experiences further remitted. Additional benefits included staff enhancement, the attainment of national nursing competency standards and compliance with core NICE guidance. Comparative costs of the mainly nurse developed and supervised ward milieus were also reported as comparatively lower (Cooper, 2010). Supplementation with therapist delivered one-to-one social problem solving, pro-social behaviour development and over-learning led to important dysexecutive syndrome deficit reductions correlated to the significant negative

symptom changes reported by group trials. Ironically, significant change in groups may have resulted from a similar practice of supplementing group sessions with individual sessions and not the groups per se. However, these anecdotal insights cannot be asserted with any certainty, or generalized, particularly in relation to the more rigorous evidence generated by the group studies. Training nurses in ward contexts also proved problematic, wider management support was low and levels of patient satisfaction equivocal. Further application and more rigorous investigation are warranted.

### *Individual CBTp*

*Interpretation:* A number of studies relating to individual CBTp in HS were identified. In a single case study analysis, Bentall and Haddock (2000) evaluated the impact on HS patients of a time-limited community CBTp treatment protocol for auditory hallucinations. Benn (2002) reported on the impact of using more idiosyncratic interventions with adherent male subjects, an approach Rogers and Curran (2004) replicated in their study. Cawthorne (2004) used a within subjects analysis of difference to determine the impact on chronic adherent HS patients of an adapted positive symptom focused CBTp protocol. Ewers, Leadley and Kinderman (2000) and Slater (2011) used purposive sampling to target less adherent, more typical HS patients in their case analyses, whilst Garrett and Lerman (2007) explored the impact of individual time-limited interventions on chronic long-term patients. An interpretation of these studies with regard to method, patient group, mode of delivery and main results is offered in Table 4. Subsequent inferences are shown in Box 3.

*Appraisal.* Reported efficacy for individual therapy was better than for groups and ward milieus. Study data suggested that HS patients who engaged in individual CBTp experienced active symptom profiles in excess of the norms expected for the diagnostic category. This may support population specificity arguments and help explain the greater level of efficacy of individual therapy (Nijman et al., 2004). The data indicated that whilst patient behaviour may stabilize during the initial period of admission (Nijman et al., 2004), this may not correlate with symptom remission. Attempts to introduce nomothetic non-forensic derived protocols for individual CBTp resulted in treatment failure (Bentall and Haddock, 2000). Several studies suggested that flexibility in combination with sensitive contextual and idiosyncratic adaptations could substantially enhance efficacy with adherent HS patients (Benn, 2002; Rogers and Curran, 2004). However, additional adaptation encompassing an initial phase of chief-complaint rather than symptom orientated therapy seemed to successfully engage more typical non-adherent HS patients (Ewers et al., 2000; Slater, 2011), further emphasizing specificity. In their studies Ewers et al. (2000) and Slater (2011) were able to demonstrate that specificity barriers within HS populations could be effectively addressed by first focusing therapy on a co-established non-symptom-based chief complaint. This context specific mode of individual CBTp seemed to offer a gateway to and platform for later symptom-based interventions and to substantially increase the likelihood of engagement and subsequent recovery amongst typical HS patients.

These engagement based adaptations resulted in protracted therapy periods in excess of the minimum requirement of 16 for non-HS populations (NICE, 2014). Individual interventions targeting global symptom experiences needed fewer sessions than for similar global group interventions (50-54 for individual, compared to 70+ for groups). As with the groups,

**Table 4.** An interpretation of the studies relating to individual CBTp

Study	Method	Patient group	Delivery	Main results
Benn, 2002	Case series triangulation ( $n=2$ ) using a descriptive analysis of difference in pre and post intervention outcomes.	Two adherent male HS subjects, Malcolm and Colin, both of whom experienced chronic medication resistant delusions within or above the norms expected for schizophrenia. Malcolm also experienced hallucinations.	Idiosyncratic patient experiences were used to collaboratively conceptualise single symptom experiences and incorporate offence related factors, prior to targeted interventions. Therapy was delivered by a psychologist.	Malcolm reported a marked reduction in grandiose beliefs and auditory hallucinations. Persecutory delusions (not targeted) remained unchanged. Colin reported a reduction in delusional beliefs and a cessation of associated risk behaviours. Anecdotal multi-disciplinary evidence corroborated gains. Reactive low mood, linked to increased insight and acceptance, was conceptualized as an integral component of change.
Bentall and Haddock, 2000	Case study triangulation ( $n=1$ ) using case description and therapist reflections. Assessments were also used on a sessional basis to produce time series data for descriptive and visual analysis.	A male patient who experienced residual hallucinations and was deemed co-operative and adherent.	A time-limited community CBTp treatment protocol for auditory hallucinations was delivered by a psychologist.	Initial reductions in frequency, loudness and degree of distress were accompanied by increased depression. Gains were not maintained and the intervention was considered a treatment failure.
Cawthorne, 2003	Within-subjects analysis of pre and post measures ( $n=5$ ) using visual and statistical analysis of difference to determine impact.	Adherence was good. Sample demographics were similar to those reported in non-HS studies. Baseline outcomes matched norms for the diagnostic category. Moderate to major levels of depression and anxiety were detected. Patients with subclinical baseline outcomes were excluded from further analysis.	An adapted, nurse-therapist-delivered, 20-session, positive symptom focussed CBTp protocol (Allan and Gumley, 2002, as cited by Cawthorne, 2003).	Visual analysis of outcomes indicated improvements in hallucinations ( $n=3/5$ ) and delusions ( $n=4/4$ ). Mean hallucination and delusion scores at the end of therapy were markedly below that expected for the diagnostic category. Statistical significance was only achieved for improvements on hallucinations ( $p>0.05$ ), however, error cannot be excluded due to sample size limitations. Levels of depression and anxiety seemed comparatively unchanged.

Table 4. Continued

Study	Method	Patient group	Delivery	Main results
Ewers, Leadley and Kinderman, 2000	Case study triangulation ( $n=1$ ).	Purposive sampling was used to target a patient who had repeatedly declined collaborative non-compulsory treatments as these individual were deemed to be more typical of the HS patient population than those with good adherence. Pre-therapy assessment outcomes were in excess of that expected for the diagnostic category.	A chief complaint rather than specific-symptom orientated approach and protracted engagement and intervention periods (50+ sessions) were used to augment more established CBTp strategies (Fowler et al., 1995).	The patient engaged and reported feeling heard and understood for the first time. He became less isolated and more confident. A visual analysis of difference in pre, post and follow-up (3 months) scores on a number of measures suggested marked and lasting reductions in delusions and anxiety.
Garrett and Lerman, 2007	Descriptive case series ( $n=8$ ).	Severely chronic long-term patients (10+ years) who had failed to progress towards discharge.	A 20-session, one-to-one CBTp based intervention, delivered by multi-disciplinary practitioners regularly trained and supervised by experienced therapists.	Of the 8 patients targeted with the intervention, 6 were judged to have benefited. Case description was used to illustrate the effect. Despite good pharmacological compliance, one of the patients involved held little prospect of discharge due to limited motivation, engagement and insight. An ethos of co-investigation, supported by behavioural experiments, resulted in the patient doubting his primary delusion. Transient feelings of guilt and worthlessness were normalised and sensitively explored. Persecutory beliefs, linked to involvement in off-ward activities, were successfully discredited - leading to active involvement and consideration for discharge. The pharmacological orientation of the context, and patient fears about how information might be used, were reported as barriers to engagement.

**Table 4.** Continued

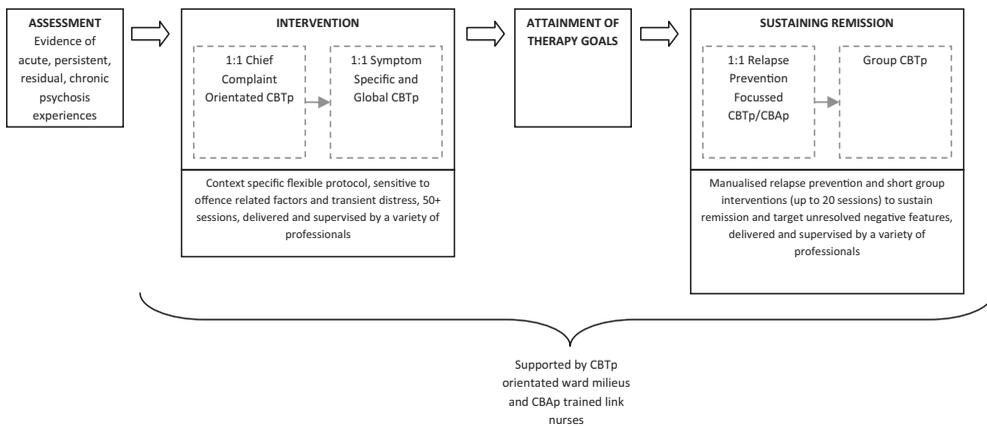
Study	Method	Patient group	Delivery	Main results
Rogers and Curran, 2004	Case study triangulation ( $n=1$ ).	An adherent male patient described as chronic and treatment resistant.	Rogers and Curran (nurse therapists) targeted risk related command hallucinations using a similar idiosyncratic approach to Benn, 2002. A range of change methods were adopted including behavioural experiments, Socratic dialogue and family inclusion.	A marked change in strength of primary (100% → 0% conviction) and secondary beliefs. Anecdotal evidence and rich case description portrayed further gains. The importance of collaborative formulation, sensitive adaptation to the HS demographic and offence related risks, team communication and organisational support were stressed with regard to the treatment effect.
Slater, 2011	Case study triangulation ( $n=1$ ). Therapist reflections, case description, content analysis of multi-disciplinary-team (MDT) progress notes, a trend analysis of psychosis and risk related outcome data and a thematic analysis of session transcripts were triangulated to determine effect on psychosis and risk.	Purposive sampling was used to target a non-adherent typical HS patient. Length of stay was reported as 3 years. Initial assessment indicated an acute profile in excess of the expected diagnostic category norms.	Chief complaint orientation and a protracted period of therapy (54 sessions) were necessary. CTS-R ratings (Blackburn et al., 2001) and peer supervision were used to monitor and ensure fidelity. The intervention was delivered by a nurse therapist (CBT).	MDT progress note entries supported a positive effect on psychosis and risk; however transient iatrogenic effects were also reported. Across a range of idiosyncratic and psychometric measures, marked and lasting positive trends in psychosis and risk were evident with a high level of correctness ( $R^2=0.98-0.81$ , 6 month follow-up). A more wide-ranging and global recovery impact via a process of resource acquisition, recognition and application emerged from the session transcript analysis. Acquired resources were categorised as assets, strategies and attributes. Applied effects included meaningful engagement, catharsis, enhanced resilience and positive changes in related experiences such as social functioning, trauma and distressing mental experiences. Transient adverse cognitive, emotional and behavioural effects were evident during resource acquisition. Following therapy the patient was recommended for discharge by his responsible clinician.

**Box 3. Individual CBTp inferences**

- Fixed, symptom specific nomothetic protocols that lack the level of flexibility to incorporate context and index offence related factors risk treatment failure within HS
- Collaborative flexible idiosyncratic conceptualization and intervention incorporating risk and context related factors can successfully target and reduce specific positive symptom experiences and risk in adherent HS patients
- Nomothetic nurse-therapist delivered protocols that are sensitive to HS patient specificity have a marked impact within 20 sessions on delusions and hallucinations with adherent patients.
- Supervised by experienced therapists, practitioner delivered 20-session CBTp interventions can revitalize progress in severely chronic long-stay patients
- Although the majority of studies referenced a greater need to invest in longer and more flexible therapeutic relationship development, specifics were seldom offered.
- Non-adherence in HS patients is typical.
- Chief-complaint orientated CBTp results in symptom specific and global improvements for non-adherent HS patients when delivered by accredited therapists. Protracted therapy periods (50+ sessions) are necessary
- Transient iatrogenic effects (depression, guilt, anxiety, worthlessness) linked to the change process are reported in the majority of studies
- Mean aggregate scores detected comparatively little variance in depression or anxiety during therapy.
- Triangulated case study analysis is the most used method for evaluating individual CBTp in HS.
- A statistical analysis of significance was only offered in one study.
- The number of patients evaluated remains limited.
- Very few studies offered fidelity data linking their interventions to a specific approach.

symptom specific individual therapy required fewer sessions, a comparable number to the groups. For adherent HS patients it was also possible to develop and usefully apply symptom specific protocols. Important gains for severely chronic long-stay HS patients, which other treatments had failed to progress, were also reported. In this instance therapy was protocol based (developed within context) and delivered by practitioners trained and supported by experienced therapists. Offering individual CBTp earlier might therefore reduce lengths of stay as well as the high costs associated with long-stay HS patients. The majority of one-to-one CBTp studies were nurse led; although it is important to recognize the multi-disciplinary development of specificity adaptations reflected within the studies, the potential financial implications regarding delivery may warrant deeper investigation.

In contrast to the group trials, a higher level of transient iatrogenic effects resulted from individual therapy. Whilst this might offer cause for concern, the rich description the case analyses contain supports the Vallentine et al. (2010) assertion that these effects may be associated with and indicative of change. The contrast in efficacy between group and individual HS CBTp is commensurate with this theory. However, levels of reported individual CBTp efficacy are largely from case analysis, which differs from the more controlled group



**Figure 2.** An algorithm for effective evidence-based HS CBTp

evaluations. A more rigorous evaluation of individual HS CBTp is warranted in order to facilitate more accurate comparisons.

### *Synthesis and comparison*

This review establishes the rich diversity of CBTp service provision developed internationally within HS establishments. In the UK, the NHS Commissioning Board stipulates that patients should have equal access to consistent and effective services regardless of location (NHS Commissioning Board, 2012). There is a need to consolidate and harmonize effective CBTp practices across HS sites. Synthesized from the source analysis and developed in association with the UK High Secure Hospitals CBTp Collaboration Group, an algorithm for effective evidence-based cross-site HS CBTp is tentatively offered in [Figure 2](#).

Although the HS studies in this review were not considered by NICE in developing its most recent guidance (NICE, 2014), the derived algorithm compares favourably. Both support application across all presentations, they support the efficacy of individual CBTp over group, and the importance of supervision and protocols to ensure fidelity and the efficacy of delivery by a variety of professions. However, there are also some crucial differences. The HS algorithm emphasizes the need for context specific protocols that include greater flexibility, extended therapy periods and sensitivity towards offence related factors. Chief complaint orientation prior to symptom specific interventions is included as a means of managing adherence related difficulties and the potential for transient distress linked to change is acknowledged. The efficacy of group interventions to target hard-to-treat negative symptoms within HS contexts is also recognized, as is the potential for ward milieus and CBAp trained link nurses to further enhance and progress gains.

### **Conclusions**

A pragmatic iterative search strategy and hermeneutic source analysis have been used to access a wider body of HS CBTp studies than has previously been considered, one that

has included fugitive literature. Although novel and limited, the inclusion of fugitive source materials offers a means of informing discussion within the field and uncovering important perspectives that might otherwise be lost (Boell and Cecez-Kecmanovic, 2010). The mode of analysis also facilitated greater transparency with regard to analyst primary interpretations, inferences and subsequent appraisals than may be typical. This exploratory review indicates that CBTp is an active component of treatment in HS contexts in the UK and internationally. A synthesis of the more efficacious practices has been offered in the form of an interventions algorithm, a multi-site controlled trial may afford a more robust and rigorous analysis with which to inform wider guidance. Whilst there were similarities between HS and non-HS CBTp provision, the algorithm and review literature highlight key necessary differences. Continued application and evaluation of HS CBTp interventions are warranted.

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