

Early discharge in acute mental health: a rapid literature review

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1 **Abstract**

2 Long psychiatric hospital stays are unpopular with services users, harmful and
3 costly. Economic pressures alongside a drive for recovery orientated care in the
4 least restrictive contexts, have led to increasing pressure to discharge people from
5 hospital early. Hospital discharge is however complex, stressful and risky for service
6 users and families. This rapid literature review aimed to assess what is known about
7 early discharge in acute mental health. Searches were conducted in nine
8 bibliographic databases, reference lists and targeted grey literature sources.
9 Fourteen included papers focused on early discharge in mental health, a population
10 over 18 years with a mental health condition and reported outcomes on therapeutic
11 care or service delivery. Quality appraisal was undertaken using The Mixed Method
12 Appraisal Tool. The meta-summary of the literature found that early discharge **was**
13 **neither** provided to all inpatients **nor** limited to **the Crisis Resolution and Home**
14 **Treatment (CRHT) service model internationally**. Early discharge interventions
15 required collaborative working and discharge planning. It was not associated with
16 unplanned readmissions and had a small effect on length of stay. Most studies
17 reported service outcomes **whereas health outcomes were** underreported.
18 Professionals and service users were positive about early discharge and **service**
19 **users asked for peer support. Carers preferred** hospital or day hospital care
20 suggesting their need for respite. Limitations in the scope, detail and quality of the
21 evidence about early discharge leaves an unclear picture of the **components** of
22 early discharge as an intervention, its effectiveness, cost effectiveness or outcomes.

23 **Keywords**

24 adult mental health, literature review, patient discharge, psychiatric nursing

25 **Introduction**

26
27 Psychiatric de-institutionalisation is a global priority and has resulted in large
28 reductions in psychiatric beds in most high income countries (WHO, 2013). Whilst
29 psychiatric hospital care in these countries has been replaced with a range of
30 community based alternatives, unsustainable bed occupancy levels continue to be
31 reported, particularly in acute mental health care (Gilburt et al., 2015).

32 Psychiatric hospital stays are becoming shorter, enabling care delivery in the least

33 restrictive environment (Crompton and Daniel, 2006), avoiding harm caused by
34 prolonged psychiatric hospitalisation (Loch, 2014) and reducing service costs
35 (McCrone et al., 2009). One approach used to reduce the length of hospital stay is to
36 facilitate an early discharge (Crompton and Daniel, 2006).

37 Any psychiatric hospital discharge is associated with challenges due to the complex
38 nature of the issues people face (Paton et al., 2016), including risk of relapse; not
39 taking medicines as prescribed; not attending the first outpatient appointment
40 (Steffen et al., 2009); disrupted family environment, increased violence within the
41 family, social embarrassment due to stigma (Loch, 2014); and unplanned psychiatric
42 readmission (Vigod et al., 2013). The most catastrophic adverse event associated
43 with psychiatric hospital discharge is suicide (NCISH, 2016). Analysis of suicide
44 rates internationally, show increases in the months following psychiatric hospital
45 discharge. More specifically, Bickley et al., (2013) observed that the highest suicide
46 rate was in the first week, with a peak in the rate on the second day post discharge.

47 Discharge from acute mental health wards is experienced by services users as
48 chaotic and stressful (Wright et al., 2015) as they struggle to readjust to family life
49 (Keogh et al., 2015). Family members and informal carers report receiving
50 inadequate information and experience frustration at an apparent lack of progress
51 towards recovery, particularly when the discharge takes place before the acute
52 episode has resolved (Gerson and Rose, 2012).

53 Service development has tended to focus on hospital avoidance with comparatively
54 less emphasis on hospital discharge (Wright et al., 2015), yet hospital admission can
55 only be avoided for a proportion of people (Sjölle et al., 2010). Practice experts have
56 suggested that hospital avoidance interventions alone will not reduce pressure on
57 beds without an equal emphasis on facilitating early discharges (Lakhani, 2006).

58 Crisis Resolution and Home Treatment services (CRHT) provide assessment,
59 referral and urgent care in the community for people experiencing an acute crisis
60 related to their mental health (Crompton and Daniel, 2006). Implementation of CRHT
61 as a service design is limited to the USA, Australasia and Europe; specifically the
62 Netherlands, Norway and the UK (Lloyd-Evans et al., 2017). Whilst the facilitation of
63 early discharge is described as a core function of CRHT (Lloyd-Evans and Johnson,

64 no date), it has not been implemented in every CRHT in the UK or elsewhere (Lloyd-
65 Evans et al., 2017). Internationally, crisis services have been described as
66 'heterogeneous' in title and function (Johnson, 2007). Because of variations in crisis
67 care service design, it is important to understand examples of early discharge not
68 limited to CRHT models.

69 There are a number of published systematic reviews related to **crisis care, length**
70 **of hospital admission and discharge planning** in mental health practice; none
71 have focused specifically on early discharge. This rapid review aimed to assess what
72 is known about early discharge in acute mental health. To meet this aim, this review
73 focused on extracting data that described service designs, service and health
74 outcomes, the characteristics of people who are discharged early, the components of
75 interventions delivered by practitioners and people's experiences of early discharge.

76 Methods

77 Design

78
79 The rapid literature review method, (Booth et al., 2016) was used to provide an
80 assessment of what is already known about early discharge in acute mental health.
81 Rapid reviews use systematic review methods to search and critically appraise
82 existing research within limited resource and time constraints; this review was
83 conducted in ten months to meet the expectations of the funder. Rapid reviews have
84 been criticised for being less rigorous than systematic reviews. Three reviews of the
85 rapid review method however, reported little empirical evidence of a negative impact
86 on the study conclusions, when compared to systematic review methods (Tricco et
87 al., 2015). This rapid review is reported in accordance with the Preferred Reporting
88 Items for Systematic review and Meta-Analysis (PRISMA) statement (Liberati, et al.,
89 2009). RefWorks, a bibliographic data management tool, was used to organise the
90 results from the literature searches and to remove duplicate results. All papers not
91 held by the author's libraries were requested from The British Library.

92 Search methods

93
94 The information sources and search terms used were identified by all authors of the
95 review, agreed with the project reference group, and the searches undertaken by the
96 Information Scientist (DH). Nine bibliographic databases were searched in March
97 2016 as follows: Applied Social Sciences Index and Abstracts (ASSIA) (ProQuest

98 interface), CINAHL (EBSCO interface), Cochrane Library (Wiley interface), EMBASE
99 (NICE Healthcare Databases interface), Health Management Information Consortium
100 (HMIC) (NICE Healthcare Databases interface), MEDLINE (EBSCO interface),
101 PsycINFO (ProQuest interface), Scopus (Elsevier interface), Sociological Abstracts
102 (ProQuest interface). Grey literature searches were undertaken on targeted
103 resources and NICE Evidence Search (NICE) using a truncated search strategy in
104 May 2016. Author, citation and reference searches were also undertaken in
105 December 2016.

106 Search strategy

107
108 The search strategy comprised three facets with terms relating to: (1) early
109 discharge, (2) inpatient settings such as hospital wards, and (3) mental health. All
110 terms were searched for in the title and abstract fields and controlled vocabulary
111 terms were used where available. The Boolean operators AND and OR were used,
112 alongside truncation, phrase searching and proximity operators. Where available,
113 search limiters were applied to only retrieve studies published since January 2006
114 onwards and published in the English language. The search syntax and, where
115 available, the controlled vocabulary terms were adapted for use on each information
116 source. The full search strategy, written up for MEDLINE (EBSCO interface) is
117 provided in Appendix 1.

118 Eligibility criteria

119
120 Studies eligible for inclusion in the review must have reported primary quantitative,
121 qualitative, or mixed methods data, and have been published in the English
122 language between January 2006 and March 2016. Studies that reported participants
123 aged 18 years or over, with a primary diagnosis of a mental health condition or with
124 comorbidities (provided the primary focus was on mental health) were eligible for
125 inclusion. Studies were excluded if the primary focus was on participants with:
126 learning disabilities, substance use, dementia, non-psychiatric diagnoses or
127 pharmaceutical interventions. The reported focus of the study must be (1) early
128 discharge from an acute mental health inpatient setting, and/or (2) **community**
129 **mental health care** where primary data related to early discharge is provided.
130 Studies were not required to have included a comparator. The study must have
131 focused on one or both of the outcomes as follows: (1) the therapeutic management

132 of care, (2) service delivery and structure. Studies were excluded if the setting was
133 psychiatric intensive care, because people are less likely to receive an early
134 discharge directly from this setting. Settings also excluded were forensic psychiatric
135 services, specialist psychotherapeutic or therapeutic communities.

136 Study selection

137
138 All papers were assessed for eligibility for inclusion in the review based on their
139 relevance using the eligibility criteria and in the order of: intervention, setting,
140 population, study type and outcomes. The study selection process was piloted
141 before the results were independently screened by two reviewers (either NC, DH or
142 SB). Reviewers were not blinded to the authors of the studies that were screened.
143 Screening for relevancy took place first at title and abstract level, followed by a full-
144 text reading of all remaining papers. Discrepancies in screening were resolved by
145 discussion.

146 Quality appraisal

147
148 The Mixed Methods Appraisal Tool (MMAT) (Pluye et al., 2011) was used to
149 appraise and describe the quality of each of the included papers. It comprises five
150 sets of criteria; each set designed for use with specific study types. All of the
151 included papers were appraised by one of the review authors (NC or DH) and four
152 out of the 14 included studies were randomly selected to be appraised by a second
153 reviewer (NC or DH). Studies were not excluded as a result of their MMAT
154 performance as “there is little empirical evidence on which to base decisions for
155 excluding studies based on quality assessment” (Thomas and Harden, 2008).
156 Studies were also not weighted. Instead, as suggested by the creators of the MMAT,
157 each paper received a descriptive comment for the relevant sections of the MMAT
158 and the overall quality of each study was summarised and presented as a table.

159 Data abstraction

160
161 An a priori, 62 item data extraction instrument was developed and piloted by (NC,
162 DH); data were extracted by one of the review authors (NC or DH) and four out of
163 the 14 included studies were randomly selected to have all data extracted by a
164 second reviewer (NC or DH). No data extraction discrepancies were found.

165 Data were extracted from each included study on: (1) study details, (2) service
166 design, (3) patient population data, (4) interventions, (5) admission/discharge
167 process, (6) recovery outcomes post early discharge, (7) adverse events post early
168 discharge, (8) experience and acceptability of early discharge, (9) economic
169 evaluation. A list of items included in the data extraction tool is in Appendix 2.

170 Data synthesis

171
172 The findings from the papers included in the review comprise quantitative, qualitative
173 or mixed methods data. To synthesise the results, two approaches were taken at
174 different stages of the process; (1) integration during data extraction and (2)
175 qualitative meta-summary (Sandelowski et al., 2007). Booth et al., (2016) suggest
176 that data integration can be achieved through the use of a common structure,
177 framework or model. This was realised through the use of an identical data
178 extraction instrument which was used irrespective of study type. Data were then
179 collated across all included studies using the nine headings in the data extraction
180 tool.

181 Qualitative meta-summary informed the approach to data synthesis in the respect
182 that whilst the findings draw on quantitative, qualitative and mixed method data; the
183 findings are presented using a descriptive approach and are aggregative and
184 assembled in accordance with their topic (Sandelowski et al., 2007). Barnett-Page
185 and Thomas' (2009) critique of the methods used in qualitative synthesis note this
186 approach as distinct as "the findings are accumulated and summarised rather than
187 transformed" and that "meta-summary is a way of producing a 'map'" of the findings.
188 In order to manage clinical and statistical heterogeneity, the review adopted an
189 inclusive approach to evidence synthesis and sought to use the interventional and
190 contextual complexity that was present in the data by treating heterogeneity as an
191 avenue to establish insights into the varied findings on what is known about early
192 discharge in acute mental health (Lorenc et al., 2016).

193 Risk of bias

194
195 The risk of publication bias has sought to be minimised through the inclusion of grey
196 literature searches. The possibility of bias remains, however, due to factors such as
197 non-publication, unclear reporting methods and selective reporting of findings.

198 The data collected using the MMAT has been pooled in order to generate an overall
199 picture of the quality of the body of evidence. It was not possible to complete a
200 formal assessment of the risk of bias at individual finding level due to a lack of
201 homogeneity. However, the quality of the body of evidence is discussed in relation
202 to: methodological rigour, including data collection and analysis; relevance of
203 findings to the context of the research; and identification of limitations and
204 trustworthiness. These headings were identified by undertaking a summary of the
205 meaning of each of the MMAT questions for each study type, and guidance from
206 Hannes (2011) who reflects on the importance in high quality reviews, of using
207 rigorous and trustworthy research. Importantly, because this is a mixed method
208 review, Hannes (2011, p.4) notes the need to acknowledge the “multi-dimensional
209 concept of quality in research”, beyond the sometimes contested importance of the
210 concepts of reliability, validity and objectivity.

211 **Results**

212
213 A total of 2307 unique papers were yielded from the database searches, and an
214 additional 873 papers from the grey literature searches. Eligibility assessment at title
215 and abstract level resulted in 81 papers being retained from the database searches
216 and 52 papers from the grey literature searches. Following a full-text reading of all
217 remaining papers, 10 were retained from the database searches and three from the
218 grey literature searches. One further paper was identified from having searched the
219 reference lists of included papers. No papers were identified through author and
220 citation searches on the included papers or by searching the reference lists of
221 relevant review papers. In total, 14 papers met the eligibility criteria and underwent
222 quality appraisal and data extraction processes and were included in the review. The
223 literature review screening process is summarised in Figure 1.

224 Figure 1 PRISMA flow diagram (Liberati et al., 2009)

225 Study characteristics

226
227 Of the 14 included papers, seven reported quantitative data (Desplenter et al., 2010;
228 Kingsford and Webber, 2010; Kusaka et al., 2006; Niehaus et al., 2008; Robin et al.,
229 2008; Shumway et al., 2012; Tulloch et al., 2015), three reported qualitative data
230 (Carpenter and Tracy, 2015; Gaynes et al., 2015; Rhodes and Giles , 2014) and four

231 mixed methods data (National Audit Office, 2007; Lawn et al., 2008; Morgan et al.,
232 2007; Morgan and Hunte, 2008). Three of the papers report findings using the same
233 set of study data (Morgan and Hunte, 2008; National Audit Office, 2007; Morgan et
234 al., 2007).

235 Included studies were conducted internationally, predominantly in middle to high
236 income countries (Table 1). They report data related to early discharge focused on;
237 CRHT or home treatment (Morgan and Hunte, 2008; Kingsford et al., 2010; Tulloch
238 et al., 2015; Carpenter and Tracy, 2015; National Audit Office, 2007; Morgan et al.,
239 2007; Rhodes and Giles, 2014); acute inpatient mental health (Desplenter et al.,
240 2010; Kusaka et al., 2006; Niehaus et al., 2008); evaluation of interventions to
241 reduce hospital stays (Gaynes et al., 2015; Robin et al., 2008); impact of reduced
242 acute mental health beds (Shumway et al., 2012) and peer support (Lawn et al.,
243 2008). Where studies included patient data (Carpenter and Tracy, 2015; Desplenter
244 et al., 2010; Kingsford and Webber, 2010; Lawn et al., 2008; Niehaus et al., 2010;
245 Robin et al., 2008; Shumway et al., 2012; and Tulloch et al., 2015) this is
246 summarised in Table 2.

247 Table 1 Summary of Included Studies

248
249 Table 2 Summary of Population Data

250
251 Quality appraisal

252 The quality of each of the included papers was appraised using the MMAT (Pluye et
253 al., 2011) and is reported as a descriptive summary in Table 1.

254 The quantitative data reported was limited by missing data (Niehaus et al., 2010),
255 particularly at discharge (Tulloch et al., 2015; Desplenter et al., 2010). There was a
256 reliance on historical and retrospective documentary evidence drawn from health or
257 government records and national data sets (Kingsford and Webber, 2010; Shumway
258 et al., 2012; Tulloch et al., 2015). Two studies collected prospective data (Kusaka et
259 al., 2006; Robin et al., 2008). Most studies were observational and lacked
260 comparators. Studies with a comparator were limited by the control sample being
261 larger than the interventions (Robin et al., 2008). The quasi-experimental design was
262 neither randomised nor blinded (Kusaka et al., 2000). Only one study had a long

263 follow-up of five years (Robin et al., 2008). The extraction of specific data related to
264 early discharge was difficult in some studies where the data was subsumed in
265 analysis of crisis care (Robin et al., 2008; Carpenter and Tracy 2015).

266 Some studies excluded those with the most complex needs (Robin et al., 2008) and
267 others focusing exclusively on the poorest and most needy social groups (Shumway
268 et al., 2012). Some social and demographic variables were underreported including
269 ethnicity, living conditions and socioeconomic status (Desplenter et al., 2010;
270 Niehaus et al., 2010) and health outcomes were underreported with a greater
271 emphasis on service outcomes across all included studies.

272 Five studies reported qualitative data (NAO, 2007 [Morgan et al., 2007; Morgan and
273 Hunte 2008]; Lawn et al., 2008; Rhodes and Giles 2014; Carpenter and Tracy, 2015
274 and Gaynes et al., 2015). Limited reporting of the qualitative data in these studies
275 made the quality of the findings difficult to evaluate. The sample was not fully
276 described in NAO, (2007) [Morgan et al., 2007; Morgan and Hunte 2008] and Lawn
277 et al., (2008) and the characteristics of the sample was unclear in Rhodes and Giles,
278 (2014). The methodological approach to analysis of the qualitative data was also not
279 fully reported (Carpenter and Tracy, 2015; Gaynes et al., 2015) and few qualitative
280 findings were reported by Gaynes et al., (2015) and Lawn et al., (2008). The mixed
281 method studies (NAO, 2007 [Morgan et al., 2007; Morgan and Hunte 2008] and
282 Lawn et al., 2008) did not describe mixed method data synthesis and emphasised
283 reporting of quantitative data, with an inadequate account of the contribution of the
284 qualitative data.

285 Results of synthesis

286
287 Findings are reported under five headings identified through the process of meta-
288 summary (Sandelowski et al., 2007) as follows; patient population, early discharge
289 services, practitioner interventions, experiences of early discharge and health
290 outcomes, summarised in Table 3.

291 UK studies of early discharge were centred on the role and function of CRHT (NAO,
292 2007; [Morgan et al., 2007; Morgan and Hunte, 2008]; Carpenter and Tracy, 2015;
293 Kingsford and Webber, 2010; Rhodes and Giles, 2014; Tulloch et al 2015). In a
294 French study, Robin et al., (2008) compared a planned four day hospital stay
295 followed by ambulatory care with a control group receiving usual care. In Australia,

296 Lawn et al., (2008) evaluated a pilot peer supported early discharge service where
297 peer support workers received training, were salaried and worked alongside adult
298 mental health services.

299 Three studies focused on interventions delivered on the acute wards to facilitate
300 earlier discharge. In Belgium, Desplenter et al., (2010) screened people at admission
301 to identify those at risk of delay in the discharge process. A Japanese quasi-
302 experimental study, Kusaka et al., (2006) compared the impact on length of stay of a
303 critical care pathway delivered by ward nurses to usual care. Crisis discharges were
304 used to reduce length of stay and manage bed crises in a South African mental
305 health inpatient unit for men (Niehaus et al., 2010).

306 Two studies focused on the impact of service design on length of hospital stay;
307 Shumway et al., (2012) reported reductions in length of stay following large strategic
308 reductions in available inpatient acute beds and Gaynes et al., (2015) asked key
309 informants about the impact of longer or shorter hospital stays.

310 Table 3 Summary of study outcomes and findings

311 Patient Population

312 Findings related to the number of inpatients discharged early and their
313 characteristics are presented under this heading. Robin et al., (2008) and Desplenter
314 et al., (2010) reported no notable differences in mean age or gender between those
315 receiving an early discharge intervention and those who did not. Tulloch et al.,
316 (2015) however, reported that men had modestly lower odds of receiving an early
317 discharge and more women received peer supported early discharge (Lawn et al.,
318 2008) and ward critical care path (Kusaka et al., 2006). Tulloch et al., (2015)
319 reported small differences in rates of early discharge according to ethnicity in
320 London; 5% fewer 'White British' people and 4% more 'Black (African or Caribbean)'
321 people were discharged early.

322 There were important differences related to socioeconomic status of those
323 discharged early between studies conducted in the UK and USA. In the USA, the
324 poorest, uninsured people with unstable housing had the shortest hospital stays
325 (Shumway et al., 2012; Gaynes et al., 2015) whereas, a similar population in the UK
326 were less likely to be discharged early (Kingsford and Webber, 2010; Tulloch et al.,

327 2015).

328 Approximately half of acute inpatients were considered for CRHT early discharge
329 (Morgan et al., 2007; Tulloch et al., 2015) and between 29% (Tulloch et al., 2015)
330 and 43% (Morgan et al., 2007) were discharged early. The need for a ward based
331 discharge management intervention was assessed at the point of admission in
332 91.3% of in-patients and 26.9% received the intervention (Desplenter et al., 2010).

333 In a multiple regression analysis of CRHT supported early discharges, Tulloch et al.,
334 (2015) reported that having a primary diagnosis of a personality disorder or a drug
335 and alcohol disorder when compared to schizophrenia at least halved the odds of
336 early discharge. Modestly lower odds of early discharge were reported for people
337 with non-psychotic disorders and physical health problems.

338 Having had a long hospital admission in the previous two years, having been
339 previously discharged directly to a community mental health team, being discharged
340 to a care home, problems with living conditions, moving house during the admission,
341 having problems with substance use or having relationship problems also reduced
342 the odds of early discharge (Tulloch et al., 2015).

343 The odds of being discharged early were modestly higher for those who had been
344 successfully home treated within the previous two years, those with bipolar disorder
345 or mania, relative to schizophrenia, as well as for those experiencing hallucinations
346 and delusions, depression, and self harm. People with reported relationship status of
347 “married, divorced, separated or widowed” were also associated with moderately
348 increased odds of receiving an early discharge (Tulloch et al., 2015 p408).

349

350 Early Discharge Services

351 Under this heading, service designs used to deliver early discharges and service
352 outcomes are described. The outcomes reported included length of hospital stay and
353 rate of hospital readmission.

354 CRHTs in the UK function as a gateway for all acute mental health admissions;
355 professional staff deliver this through their gatekeeping role. Where more than 50%
356 of admissions involved a professional gatekeeper; rates of early discharge more than

357 doubled (Morgan et al., 2007). Gatekeeping also provided an important opportunity
358 to identify people suitable for early discharge at the point of admission (Morgan and
359 Hunte, 2008; National Audit Office, 2007).

360 Early discharges accounted for 36% of CRHT team activity and 51.6% of those
361 identified for early discharge were discharged the same or next day (Tulloch et al.,
362 2015). Integrated models of service provision between wards, CRHT and community
363 teams improved the transition through the acute care pathway and reduced reported
364 conflict between teams about levels of risk (Rhodes and Giles, 2014). Bed shortages
365 were associated with interruptions in the flow of people through acute care in the UK
366 (Rhodes and Giles, 2014) but not in the USA (Shumway et al., 2012). Where
367 practitioners had a specific role to facilitate early discharges in CRHT; partnerships
368 and communication between ward and CRHT staff improved (Morgan et al., 2007).
369 Where psychiatrists were not embedded in CRHT, extended periods of leave were
370 used instead of early discharge (Morgan and Hunte, 2008) although the role of leave
371 of absence in early discharge facilitation was not described.

372 Tulloch et al., (2015) estimated that CRHT early discharges reduced length of stay
373 by four days with an average of 22 post discharge episodes of face-to-face contact
374 with no reported differences in the readmission rates between those who received
375 early discharge and those who did not.

376 Robin et al., (2008) reported an analysis from a longitudinal dataset where mean
377 cumulative bed days were calculated over five years for three interventions and a
378 control group. Those who received the intervention similar to early discharge [brief
379 hospital care with ambulatory care] in year one, had fewer cumulative bed days over
380 five years when compared to the control group. Rates of readmission between the
381 interventions and control were not statistically significant. Lawn et al., (2008)
382 reported a reduction in bed occupancy across the peer supported early discharge
383 project of 300 bed days, and 16.3% of the sample was readmitted. Despite this, the
384 pilot resulted in service cost savings. NAO, (2007) also reported service cost savings
385 but because these data were related to implementation of CRHT as a whole, findings
386 could not be attributed specifically to early discharges.

387 Some early discharge interventions were ward based. Niehaus et al., (2010)

388 described a service design where urgent suitability for crisis discharge was assessed
389 using a decision tool. Crisis discharges resulted in a shorter mean length of stay of
390 40.6 days compared to a mean length of stay for all male inpatients of 43.9 days and
391 men receiving usual discharges a mean 46.6 days. Incomplete discharge planning
392 may have contributed to higher readmission rates of 45% for men who had received
393 a crisis discharge compared to 30% for men receiving usual discharge; and a shorter
394 time to readmission than usual discharges (Niehaus et al., 2010).

395 Kusaka et al., (2006) evaluated the impact of implementing a ward based critical
396 care pathway designed to facilitate early discharge. Large reductions in lengths of
397 stay of 132.1 days in the intervention group and 72.6 days in the control group were
398 reported. A discharge screening process using the Global Assessment of
399 Functioning (GAF) was successfully implemented at the point of admission for over
400 91.3% of people (Desplenter et al., 2010). The GAF scores indicated that those with
401 the lowest functioning and highest needs, who were identified as at risk of discharge
402 delays, were provided with an enhanced discharge intervention.

403 Shumway et al., (2012), reported a reduction in length of stay from an average of
404 13.3 days to 9.6 days with no impact on readmission rates at 30 days following a
405 programme of strategic bed closures. Long term service planning and the availability
406 of post discharge services including housing (Shumway et al., 2012) were
407 considered important factors in the delivery of early discharges (Gaynes et al.,
408 2015). An increase in early discharges to temporary accommodation was reported,
409 including to hotels, hostels, night shelters and bed and breakfasts (Shumway et al.,
410 2012; Morgan and Hunte, 2008) and homelessness was described as a barrier to
411 early discharge (National Audit Office, 2007). Early discharge was considered
412 important in the USA because key informants described, from their experience, that
413 longer hospital stays risked housing and job loss (Gaynes et al., 2015). Having an
414 unstable home was linked to longer hospital stays in the UK (Tulloch et al., 2015)
415 and shorter hospital stays with more readmissions in the USA (Gaynes et al., 2015).

416 Practitioner interventions

417 Early discharge interventions delivered at practitioner level are described under this
418 heading. The critical care pathway implemented by acute ward nurses included

419 planned pharmacological interventions; symptom scoring; physical health
420 assessment; support with self care; recreational activities on the ward; and support
421 with life skills (Kusaka et al., 2006).

422 Collaborative discharge plans agreed between the person, their primary caregiver,
423 the hospital and other agencies should be initiated from the point of admission
424 (Desplenter et al., 2010) and early discharge should take place as soon as the
425 'reasons for admission' have been resolved (NAO, 2007; Desplenter et al., 2010;
426 Shumway et al., 2012). Crisis discharges were implemented if male patients met four
427 criteria; most clinically stable on the ward, not posing an immediate threat to self or
428 others, less ill than the person in need of urgent hospital admission, and having most
429 practical follow-up arrangements in place.

430 In a qualitative study of ten service users' experiences of home treatment where
431 three participants had been discharged early, participants described having
432 someone to talk to across 24 hours helpful although professionals were described as
433 too focused on medication and the immediate situation rather than on the causes of
434 the crisis. A lack of consistency of therapeutic approach between professionals, too
435 many different staff members visiting and visits not always appropriately timed were
436 causes for concern. Participants asked for peer support, which they felt was more
437 accessible in hospital (Carpenter and Tracy, 2015).

438 In an evaluation of a pilot, peer-supported early discharge service, peer supported
439 early discharge was initiated by a visit from a peer worker before discharge from
440 hospital in order to provide a bridge between hospital and home. Individually planned
441 peer support was then provided for 8-12 hours over the first one to two weeks post
442 discharge. Peer support workers accompanied the person to appointments, helped
443 to make important telephone calls, spent time listening to the person and developing
444 a supportive relationship. The peer support workers also provided support to family
445 members (Lawn et al., 2008).

446 Experiences of early discharge

447 Experiences of early discharge from the perspectives of people being discharged
448 early, their carers and professionals are presented under this heading. Service users
449 described peer support workers as providing; understanding, trust, reassurance,

450 continuity of care, positive role modelling and better links between hospital and
451 home. Peer support helped them to feel normal and not different, to understand
452 themselves more, to believe in their ability to meet goals, and this resulted in an
453 improved experience of the discharge process. Carers described peer support
454 workers as supportive and providing a sense of hope. Health professionals
455 described them as providing warmth and understanding, building a rapport with
456 service users, supporting the flow of information, providing prompt responses to
457 referrals and working well as part of a team (Lawn et al., 2008).

458 Health care staff were reported to be enthusiastic about early discharge (Robin et al.,
459 2008) and felt that it increased choice, decreased social stigma and maintained
460 social networks (Morgan and Hunte, 2008). Only 3% of staff identified early
461 discharge as a benefit of CRHT in a national survey (NAO, 2007). Concerns were
462 raised by healthcare staff that implementing early discharges may result in CRHT
463 being unable to meet the demand for home treatment and that ward staff may
464 become deskilled because people leave hospital earlier in their care (Morgan and
465 Hunte, 2008).

466 Service users and carers were more likely to be able to influence decisions about
467 admission than discharge; their influence was less if the person was legally detained
468 (Morgan and Hunte, 2008). When given a choice of intervention, two-thirds of service
469 users opted for ambulatory care following a brief hospital stay (Robin et al., 2008)
470 and when asked about preferences, service users expressed a preference for home
471 treatment (Carpenter and Tracy, 2015). Some carers however expressed a
472 preference for hospital care and others asked for an interim option between hospital
473 and home (Morgan and Hunte, 2008) such as acute day hospital care (Morgan et al.,
474 2007).

475 Health Outcomes

476 Reported health outcome measures reported included Global Assessment of
477 Functioning (GAF) (Shumway et al., 2010; Desplenter et al., 2010), Brief Psychiatric
478 Rating Scale (BPRS), Schedule for Assessment of Insight-Japanese version (SAI-J)
479 (Kusaka et al 2006). Other health outcomes included rates of suicide, (Shumway et
480 al., 2012) and resolution of the crisis, which was defined as a successful outcome if

481 the person was discharged from acute care (Kingsford and Webber 2010).

482 Shumway et al., (2012) hypothesised that shorter hospital stays would result in
483 poorer health outcomes at discharge. Findings showed however, that there were
484 statistically significant increases in GAF scores at discharge and that the suicide rate
485 did not increase. A limitation of this study is that it does not report if there were
486 additional interventions beyond bed reductions that could have had an impact on
487 health outcomes.

488 Reported improvements in psychiatric symptoms (BPRS) and insight (SAI-J) did not
489 reach statistical significance when length of stay was reduced by a ward critical care
490 path (Kusaka et al., 2006). Kingsford and Webber (2010) found that those who were
491 discharged early had a similar rate of successful outcomes to other types of referral
492 to CRHT. They did however report a statistically significant association between
493 increasing age and unsuccessful outcomes, and a trend, which was not statistically
494 significant, for a higher rate of successful outcome for women than men. Desplenter
495 et al., (2010) reported 1.1% (n=4) deaths in the sample but did not report cause.

496 **Discussion**

497 This rapid review has assessed what is known about early facilitated discharge in
498 acute mental health. Comparison between studies was complex due to international
499 differences in early discharge service design and the range of methodologies
500 included in the review. Methodological weaknesses in the included studies mean that
501 only tentative conclusions can be reached about early discharge in acute mental
502 health. The studies reviewed largely focused on the nature of services and service
503 outcomes and lacked emphasis on recovery or health outcomes as also noted by
504 Hegedus et al., (2017) who suggested that greater emphasis is needed on patient
505 relevant outcomes.

506 The review located international examples of acute mental health services delivering
507 early discharge interventions to reduce the length of hospital admission. Despite this,
508 not all people admitted to acute mental health wards were considered for, or
509 received, an early discharge intervention. CRHT early discharges were considered
510 for approximately half and provided for approximately one third of people admitted;
511 meeting the target of 20% set by a UK fidelity model (Lloyd-Evans et al., no date).

512 Other early discharge interventions were available to between one third (Desplenter
513 et al., 2010) and all inpatients (Kusaka et al., 2006).

514 There is an economic argument for reducing length of hospital stay, yet only one
515 study provided economic data specific to early discharge (Lawn et al., 2008), leaving
516 an incomplete picture of the extent to which early discharge contributes to cost
517 effectiveness in the acute care pathway (National Audit Office, 2007).

518 The review provided limited accounts of how decisions to discharge early were
519 informed despite policy guidance suggesting that there should be criteria informing
520 both admission and discharge decisions (DH and Crisis Concordat Signatories,
521 2014). The process used to identify people suited to an early discharge commenced
522 at the point of hospital admission through the CRHT gatekeeping role (NAO, 2007,
523 Crompton and Daniel, 2006) and through screening processes carried out on the
524 wards (Desplenter et al., 2010; Niehaus et al., 2008). Where these screening
525 processes were consistently applied to the majority of people admitted, they
526 increased the number of people discharged early (Morgan et al. 2007) and identified
527 people most likely to benefit from a discharge intervention (Desplenter et al., 2010).
528 The specific factors influencing decisions to discharge early were not always clear
529 however.

530 CRHT fidelity models suggest that individuals must be experiencing an acute phase
531 of a mental health problem to be screened into an early discharge service (Crompton
532 and Daniel, 2006), yet studies reviewed provided little insight into how acuity was
533 measured. Existing assessments, such as those described by Lloyd-Evans et al.,
534 (2017), to establish readiness for early discharge, include measures that when taken
535 together, may provide an estimation of acuity. Mental health triage measures
536 designed to estimate acuity have shown some promise in supporting clinical
537 decisions in emergency departments (Broadbent et al., 2007) and crisis mental
538 health services (Sands et al., 2013) but were not applied to clinical decisions in early
539 discharge.

540 Early discharges can take place as soon as the 'reasons for admission' have been
541 resolved (Desplenter et al., 2010) yet the studies reviewed tended to focus on
542 psychiatric reasons for admission over other psychosocial factors. This is an

543 important area for development given the links between unstable housing and
544 implementation of early discharges. Post discharge suicide rates have also been
545 shown to be higher for people who experienced adverse life events that were
546 unresolved during hospital admission (NCISH, 2016).

547 Length of hospital stay and readmission rates were routinely used as an outcome
548 measure related to early discharge. Length of stay was however inconsistently
549 reported across studies; some reported averages based on the number of days
550 between admission and discharge and others report 'bed days' where leave of
551 absence days were removed. The role of leave of absence in early discharge was
552 not outlined other than a suggestion that long periods of leave should not be a
553 substitute for early discharges (NAO, 2007).

554 The reduction in length of stay for those who received an early discharge was small
555 across all studies in the review. This brings into question the efficacy of current
556 models of early discharge facilitation especially in light of similar reductions in length
557 of stay being reported as a result of bed reductions alone in this review (Shumway et
558 al., 2010). The critical care pathway intervention in Japan (Kusaka et al., 2006)
559 showed the largest reduction in length of stay but this may be a reflection of Japan's
560 significantly longer hospital stays than seen in other parts of the developed world
561 (Niimura et al., 2016).

562 The review did not clarify what constituted 'early' in relation to length of stay. Early
563 discharges were neither associated with a predetermined length of stay, nor a
564 particularly short hospital admission. This may be because decisions to discharge
565 early are based on a number of service and individual factors, not related to the
566 duration of the hospital admission. Examples of factors influencing the odds of
567 receiving an early discharge included levels of acuity, risk, the availability of post-
568 discharge support, living situation and previous history of service use (Tulloch et al.,
569 2015; Gaynes et al., 2010).

570 Previous patterns of service use, such as a history of long hospital stays on one
571 hand or previous successful home treatment on the other, influenced the likelihood
572 of CRHT early discharge (Tulloch et al., 2015). Whilst it is unclear the extent to which
573 previous patterns of service use can predict early discharge outcomes, Robin et al.,

574 (2008) found that people who had experienced a shorter initial admission went on to
575 have fewer total bed days over five years. This suggests that people's primary
576 experiences of acute mental health services may influence their future expectations
577 and patterns of hospital admission.

578 Practitioner level interventions provided as part of early discharge, although not
579 outlined in detail, shared components present in all psychiatric hospital discharges.
580 These included discharge planning (Steffen et al., 2009; Nurjannah et al., 2016) and
581 collaboration between health providers and with non-health agencies such as
582 housing providers (Gaynes et al., 2015), and with the person and their carers
583 (Gerson and Rose, 2012). The need for strategic and long term forward planning for
584 emergency housing may be particularly important for early discharges (Joint
585 Commissioning Panel for Mental Health, 2014) in light of the reported increased use
586 of temporary accommodation (Morgan and Hunte, 2008; Shumway et al., 2012) and
587 barriers to early discharge caused by homelessness and unstable housing (NAO,
588 2007; Tulloch et al., 2015).

589 CRHT fidelity measures in the UK include a standard that early discharges take
590 place within 24 hours of the discharge decision for 90% of those identified as ready
591 for discharge (Lloyd-Evans et al., no date). The impact this rapid discharge
592 implementation has on the early discharge planning process is unreported although
593 precipitous or badly planned discharges have been associated with people
594 disengaging from services (Hegedus et al., 2017). For all discharges, increased
595 rates of post discharge suicides are reported for people who did not have a
596 discharge plan (NCISH, 2016). Whilst studies included in this review found no
597 statistically significant association between early discharge and readmission rates
598 (Robin et al., 2008; Shumway et al., 2012; Tulloch et al., 2015), one study suggested
599 that incomplete discharge planning may be a contributory factor for early
600 readmission (Niehaus et al., 2010).

601 The provision of a bridge between hospital and home was an important aspect of
602 early discharge interventions. Transitional interventions in mental health that provide
603 this 'bridge' have had success in reducing readmission rates but have reported
604 mixed results in terms of other outcomes including quality of life, symptom severity
605 and coping scores (Hegedus et al., 2017). Whilst CRHT models have been

606 implemented at scale in the UK, other examples of transitional interventions have
607 been less successfully translated into practice (e.g Forchuk et al., 2013). Batscha et
608 al., (2011) concluded that it may be important to identify those for whom a
609 transitional intervention is most likely to be effective, further emphasising the need
610 for screening at the point of admission.

611 Peer supported early discharge provided a bridge between hospital and home and
612 was valued by service users and carers (Lawn et al., 2008). A systematic review of
613 peer supported interventions in mental health reported that it may support recovery
614 although the evidence overall is not robust enough to recommend peer support as
615 an intervention (Lloyd-Evans et al., 2014). Preliminary studies of peer support have
616 also shown mixed findings with measures of loneliness and hopelessness showing
617 no significant improvement, although general health showed more promising results
618 at three months (Simpson et al., 2014).

619 Service users favoured ambulatory care or home treatment over hospital admission
620 (Robin et al., 2008; Carpenter and Tracy, 2015). Carers, however, preferred either
621 hospital admission or day hospital care (Carpenter and Tracey, 2010; Morgan and
622 Hunte, 2008; Morgan et al., 2007) suggesting their need for respite. The context of
623 international policies driving shorter hospital stays, alongside greater collaboration
624 with carers and family, points to a need to explore carers' needs, experiences and
625 expertise, especially where the person is discharged before the acute phase has
626 been resolved (Gerson and Rose, 2012). No data were available about those who
627 decline early discharge. Unclear too, was the extent to which people choose their
628 journey through acute mental health care.

629 Relevance for clinical practice

630 Screening people at admission to establish their needs at discharge improved
631 access to early discharge interventions. Further evaluation of screening approaches
632 is however required to understand the factors influencing decisions. It is also
633 important that the reasons for admission are understood so that progress towards an
634 early discharge can be measured against these reasons rather than focusing on
635 psychiatric reasons; especially since early discharge can take place before an acute
636 phase of a mental health problem has been resolved.

637 The collaborations between health services and between health services and
638 housing are particularly important to the delivery of early discharges and although
639 these are policy priorities already, improvements are still needed. The involvement of
640 the person and their family in decisions about discharge were inconsistent in the
641 review yet the availability of family support is an important factor in the delivery of
642 early discharge. Little is known about the needs or experiences of families during an
643 early discharge and this is an area of the intervention in need of further development
644 and evaluation.

645 Despite limited evidence that peer support is an effective intervention, people ask for
646 it and describe it as helpful. Peer supported early discharge is not routinely available
647 however people describe the availability of peer support on the wards. The
648 development of a peer supported early discharge intervention delivered on the wards
649 may provide a way to meet this need, particularly as part of an integrated early
650 discharge pathway.

651 Interventions designed to provide a 'bridge' between hospital and home show
652 promise in supporting early discharges but some have struggled to be implemented
653 at scale. This suggests a greater focus is needed on the implementation of
654 interventions that provide this bridge from the perspective of service commissioning
655 and evaluation.

656 Strengths and limitations

657

658 The strength of this review is its specific focus on early discharge in mental health.
659 Whilst the mixed quality of the evidence has led to only tentative conclusions being
660 drawn, the review has provided an insight into areas for development and gaps in
661 the evidence. Publication date limits were also applied. The risk of bias in study
662 selection was minimised by all papers having been double screened to determine
663 their eligibility for inclusion in the review; however, a limitation is that reviewers were
664 not blinded to the authors of the studies that were screened. Further, time and
665 resource constraints meant that whilst it was possible to list the reasons for
666 excluding papers at full-text screening phase in order of frequency of occurrence;
667 numbers are not provided. For the same reasons it was not possible to have two
668 reviewers independently quality appraise and extract data from all included studies.
669 It was also not possible to contact the corresponding authors of the papers included

670 in the review for further data, where it would have been considered beneficial, or to
671 provide a draft copy of the manuscript in order for all authors of the included papers
672 to have the opportunity to comment on the accuracy of the information.

673 The synthesis of findings is primarily descriptive and summative and interpretations
674 offered are cautious. In part, interpretations are cautious due to the varied quality of
675 individual papers and therefore the cumulative impact on the overall quality of the
676 body of evidence. Whilst this review sought to use transparent and systematised
677 approaches, there will always remain within this type of mixed methods research the
678 propensity for the subjective perspective and experience of the authors to filter into
679 the data synthesis (Booth et al., 2016).

680 **Conclusion**

681 Early discharge is delivered using a range of service designs internationally. It has a
682 small effect on length of stay and no reported impact on re-admission rates. It is an
683 acceptable intervention to service users and staff but carers' experiences are
684 unclear. Discharge planning and collaborative care are important particularly
685 collaborative relationships between mental health services and housing providers.
686 The impact of early discharge on health and recovery are underreported. Overall, the
687 review found the evidence for early discharge provided a limited picture of the
688 components of an early discharge intervention, its outcomes or people's experiences
689 of it.

690

691 **References**

692

693 Barnett-Page, E., & Thomas, J. (2009) Methods for the synthesis of qualitative
694 research: A critical review. *BMC Medical Research Methodology*, 9(59).

695 <https://doi:10.1186/1471-2288-9-59>

696

697 Batscha, C., McDevitt, J., Weiden, P., Dancy, B. (2011) The effect of an inpatient
698 transition intervention on attendance at the first appointment post-discharge from
699 psychiatric hospitalisation. *Journal of the American Psychiatric Nurses Association*,
700 17, 5, 330-338. <https://doi.org/10.1177/1078390311417307>

701

702 Bickley, H., Hunt, I., Windfuhr, K., Shaw, J., Appleby, L., Kapur, N. (2013) Suicide
703 within 2 weeks of discharge from psychiatric inpatient care: a case control study.

704 *Psychiatric Services*, 64(7), 653-659. <https://doi.org/10.1176/appi.ps.201200026>

705
706 Booth, A., Sutton, A., Papaioannou, D. (2016) *Systematic approaches to a*
707 *successful literature review* (2nd ed.). London, Sage.
708
709 Broadbent, M., Moxham, L., Dwyer, T. (2007) The development and use of mental
710 health triage scales in Australia. *International Journal of Mental Health Nursing*, 16,
711 413-421. <https://doi.org/10.1111/j.1447-0349.2007.00496.x>
712
713 Carpenter, R.A., & Tracy, D.K. (2015) Home treatment teams: What should they do?
714 A qualitative study of patient opinions. *Journal of Mental Health*, 24(2), 98-102.
715 [doi:10.3109/09638237.2015.1019046](https://doi.org/10.3109/09638237.2015.1019046)
716
717 Crompton, N., & Daniel, D. (2006) Guidance statement on fidelity and best practice
718 for crisis services. London, Department of Health, NHS National Institute for Mental
719 Health in England, Care Services Improvement Partnership
720
721 Department of Health and Crisis Concordat Signatories (2014), *Improving outcomes*
722 *for people experiencing mental health crisis*. London, Department of Health
723
724 Desplenter, F., Laekeman, G., Moons, P., Simoens, S. (2010) Discharge
725 management for patients in Flemish psychiatric hospitals. *Journal of Evaluation in*
726 *Clinical Practice*, 16(6), 1116-1123. [https://doi.org/10.1111/j.1365-](https://doi.org/10.1111/j.1365-2753.2009.01279.x)
727 [2753.2009.01279.x](https://doi.org/10.1111/j.1365-2753.2009.01279.x)
728
729 Forchuk, C., Martin, M., Jensen, E., Ouseley, S., Sealy, P., Beal, G., Reynolds, W.,
730 Sharkey, S., (2013) Integrating an evidence based intervention into clinical practice:
731 'transitional relationship model', *Journal of Psychiatric and Mental Health Nursing*,
732 20, 584-594. Doi: 10.1111/j.1365-2850.2012.01956.x
733
734 Gaynes, B.N., Brown, C., Lux, L. J., Ashok, M., Coker-Schwimmer, E., Hoffman, V.,
735 Sheitman, B., Viswanathan, M. (2015). Management strategies to reduce psychiatric
736 readmissions. Technical Brief No. 21. (Prepared by the RTI-UNC Evidence-based
737 Practice Center under Contract No. 290-2012-00008-I.) AHRQ Publication No.15-
738 EHC018-EF. Rockville, MD, Agency for Healthcare Research and Quality.
739 <https://www.ncbi.nlm.nih.gov/books/NBK294451/>
740
741 Gerson, L., & Rose, L. (2012) Needs of persons with serious mental illness following
742 discharge from inpatient treatment: Patient and family views. *Archives of Psychiatric*
743 *Nursing*, 26(4), 261-271. <https://doi.org/10.1016/j.apnu.2012.02.002>
744
745 Gilbert, H. (2015) *Briefing: Mental health under pressure*. London, The King's Fund
746
747 Hannes, K. (2011) Chapter 4: Critical appraisal of qualitative research. In: Noyes, J.,
Booth, A., Hannes, K., Harden, A., Harris, J., Lewin, S., Lockwood, C. (eds.)

748 *Supplementary guidance for inclusion of qualitative research in Cochrane systematic*
749 *reviews of interventions*. Version 1 (updated August 2011). Cochrane Collaboration
750 Qualitative Methods Group. [http://cqrmg.cochrane.org/supplemental-handbook-](http://cqrmg.cochrane.org/supplemental-handbook-guidance)
751 [guidance](http://cqrmg.cochrane.org/supplemental-handbook-guidance)
752

753 Hegedus, A., Kozel, B., Frankhauser, N., Needham, I., Behrens, J. (2017) Outcomes
754 and feasibility of the short transitional intervention in psychiatry in improving the
755 transitions from inpatient treatment to the community: A pilot study. *International*
756 *Journal of Mental Health Nursing*, doi: 10.1111/ijm.12338
757

758 Joint Commissioning Panel for Mental Health (2013) Acute care - inpatient and crisis
759 home treatment. London, JCP-MH. [https://www.jcpmh.info/wp-](https://www.jcpmh.info/wp-content/uploads/jcpmh-acutecare-guide.pdf)
760 [content/uploads/jcpmh-acutecare-guide.pdf](https://www.jcpmh.info/wp-content/uploads/jcpmh-acutecare-guide.pdf)
761

762 Johnson, S. (2007) Crisis resolution and intensive home treatment teams.
763 *Psychiatry*, 6, 339-342. <https://doi.org/10.1016/j.mppsy.2007.05.011>
764

765 Keogh, B., Callaghan, P., Higgins, A. (2015) Managing preconceived expectations:
766 mental health service users experiences of going home from hospital: a grounded
767 theory study. *Journal of Psychiatric and Mental Health Nursing*, 22, 715-723.
768 <https://doi.org/10.1111/jpm.12265>
769

770 Kingsford, R., & Webber, M. (2010). Social deprivation and the outcomes of crisis
771 resolution and home treatment for people with mental health problems: A historical
772 cohort study. *Health & Social Care in the Community*, 18(5), 456-464 9p.
773 <https://doi.org/10.1111/j.1365-2524.2010.00918.x>
774

775 Kusaka, K., Kanoya, Y., Sato, C. (2006). Effects of introducing a critical path method
776 to standardize treatment and nursing for early discharge from acute psychiatry unit.
777 *Journal of Nursing Management*, 14(1), 69-80. [https://doi.org/10.1111/j.1365-](https://doi.org/10.1111/j.1365-2934.2005.00552.x)
778 [2934.2005.00552.x](https://doi.org/10.1111/j.1365-2934.2005.00552.x)
779

780 Lakhani, N. (2006) Facilitating early discharge. In: McGlynn, P. (ed.), *Crisis*
781 *Resolution and Home Treatment : A Practical Guide*. London, Sainsbury Centre for
782 Mental Health
783

784 Lawn, S., Smith, A., Hunter, K. (2008). Mental health peer support for hospital
785 avoidance and early discharge: An Australian example of consumer driven and
786 operated service. *Journal of Mental Health*, 17(5), 498-508.
787 <https://doi.org/10.1080/09638230701530242>
788

789 Liberati, A., Altman, D.G., Tetzlaff, J., Mulrow, C., Gotzsche, P.C., Ioannidis, J.P.,
790 Clarke, M., Devereaux, P.J., Kleijnen, J., Moher, D: The PRISMA statement for

791 reporting systematic reviews and meta-analyses of studies that evaluate healthcare
792 interventions: Explanation and elaboration. *PLoS Medicine*. 2009, 6(7), e1000100.
793 <https://doi.org/10.1371/journal.pmed.1000100>
794

795 Loch, A. (2014) Discharged from a mental health admission ward: is it safe to go
796 home? A review on the negative outcomes of psychiatric hospitalisation. *Psychology*
797 *Research and Behaviour Management*, 7, 137-145.
798 <https://doi.org/10.2147/PRBM.S35061>
799

800 Lloyd-Evans, B., Mayo-Wilson, E., Harrison, B., Instead, H., Pilling, S., Johnson, S.,
801 Kendall, T. (2014) A systematic review and meta-analysis of randomised controlled
802 trials of peer support for people with severe mental illness. *BMC Psychiatry*, 14(39).
803 <https://doi.org/10.1186/1471-244X-14-39>
804

805 Lloyd-Evans, B., Paterson, B., Onyett, S., Brown, E., Istead, H., Gray, R.,
806 Henderson, C., Johnson, S. (2017) National implementation of a mental health
807 service model: A survey of Crisis Resolution Teams in England. *International Journal*
808 *of Mental Health Nursing*. <https://doi.org/10.1111/inm.12311>
809

810 Lloyd-Evans, B. & Johnson, S. (no date) Core Crisis Resolution Team Fidelity Scale
811 Version 2, Camden and Islington NHS Foundation Trust and University College
812 London, London. <https://www.ucl.ac.uk/core-study/>
813

814 Lorenc, T., Felix, L., Petticrew, M., Melendez-Torres, G.J, Thomas, J., Thomas, S.,
815 O'Mara-Eves, A., Richardson, M. (2016). Meta-analysis, complexity, and
816 heterogeneity: A qualitative interview study of researchers' methodological values
817 and practices. *Systematic Reviews*, 5(192). [https://doi.org/10.1186/s13643-016-](https://doi.org/10.1186/s13643-016-0366-6)
818 [0366-6](https://doi.org/10.1186/s13643-016-0366-6)
819

820 McCrone, P., Johnson, S., Nolan, F., Pilling, S., Sandor, A., Hout, J., McKenzie, N.,
821 Thompson, M., Bebbington, P. (2009) Economic evaluation of a crisis resolution
822 service: A randomised controlled trial. *Epidemiologia e Psichiatria Sociale* 18(1),
823 54-58. <https://doi.org/10.1017/S1121189X00001469>
824

825 Morgan, S., Gauntlett, N., Hunte, K., McKinley, C., Wetherell, A., Wetherell, R.
826 (2007) Are crisis resolution and home treatment services seeing the Patients they
827 are supposed to see? report on behalf of the national Audit Office. National Audit
828 Office. [https://www.nao.org.uk/wp-](https://www.nao.org.uk/wp-content/uploads/2007/12/07085_report_of_interviews.pdf)
829 [content/uploads/2007/12/07085_report_of_interviews.pdf](https://www.nao.org.uk/wp-content/uploads/2007/12/07085_report_of_interviews.pdf)
830

831 Morgan, S., & Hunte, K. (2008). One foot in the door. *Mental Health Today*, March,
832 32-35. <https://www.ncbi.nlm.nih.gov/pubmed/18421824>
833

834 National Audit Office, Helping People through Mental Health Crisis: the Role of Crisis
835 Resolution and Home Treatment Services (HC5 2007-08, 7 December 2007).
836 http://www.nao.org.uk/publications/nao_reports/07-08/07085.pdf
837

838 National Confidential Inquiry into Suicide and Homicide by People with Mental Illness
839 (NCISH) (2016) Making Mental Health Care Safer: Annual Report and 20-year
840 Review. Manchester, University of Manchester.
841 [http://research.bmh.manchester.ac.uk/cmhs/research/centreforsuicideprevention/nci/
842 reports/2016-report.pdf](http://research.bmh.manchester.ac.uk/cmhs/research/centreforsuicideprevention/nci/reports/2016-report.pdf)
843

844 Niehaus, D.J.H., Koen, L., Galal, U., Dhansay, K., Oosthuizen, P.P., Emsley, R.A.,
845 Jordaan, E. (2008). Crisis discharges and readmission risk in acute psychiatric male
846 inpatients. *BMC Psychiatry*, 8. <https://doi.org/10.1186/1471-244X-8-44>
847

848 Niimura, J., Tanoue, M., Nakanishi, M. (2016) Challenges following discharge from
849 acute psychiatric inpatient care in japan: patients' perspectives. *Journal of*
850 *Psychiatric and Mental Health Nursing*. <https://doi.org/10.1111/jpm.12341>
851

852 Nurjannah, I., Mills, J., Usher, K., Park, T., (2016) Discharge planning in mental
853 health care: an integrative review of the literature. *Journal of Clinical Nursing*, 23,
854 1175-1185. <https://doi.org/10.1111/jocn.12297>
855

856 Paton, F., Wright, K., Ayre, N., Dare, C., Johnson, S., Lloyd-Evans, B., Simpson, A.,
857 Webber, M., Meader, N. (2016) Improving outcomes for people in mental health
858 crisis: A rapid synthesis of the evidence for available models of care. *Health*
859 *Technology Assessment*, 20, 3, <https://doi.org/10.3310/hta20030>
860

861 Pluye, P., Robert, E., Cargo, M., Bartlett, G., O'Cathain, A., Griffiths, F., Boardman,
862 F., Gagnon, M.P., & Rousseau, M.C. (2011). Proposal: A mixed methods appraisal
863 tool for systematic mixed studies reviews. Department of Family Medicine, McGill
864 University, Montreal, Canada. <http://mixedmethodsappraisaltoolpublic.pbworks.com>

865 Rhodes, P., & Giles, S. J. (2014). "Risky business": A critical analysis of the role of
866 crisis resolution and home treatment teams. *Journal of Mental Health*, 23(3), 130-
867 134. <https://doi.org/10.3109/09638237.2014.889284>
868

869 Robin, M., Bronchard, M., & Kannas, S. (2008). Ambulatory care provision versus
870 first admission to psychiatric hospital: 5 years follow up. *Social Psychiatry and*
871 *Psychiatric Epidemiology*, 43(6), 498-506. [https://doi.org/10.1007/s00127-008-0326-
872 0](https://doi.org/10.1007/s00127-008-0326-0)
873

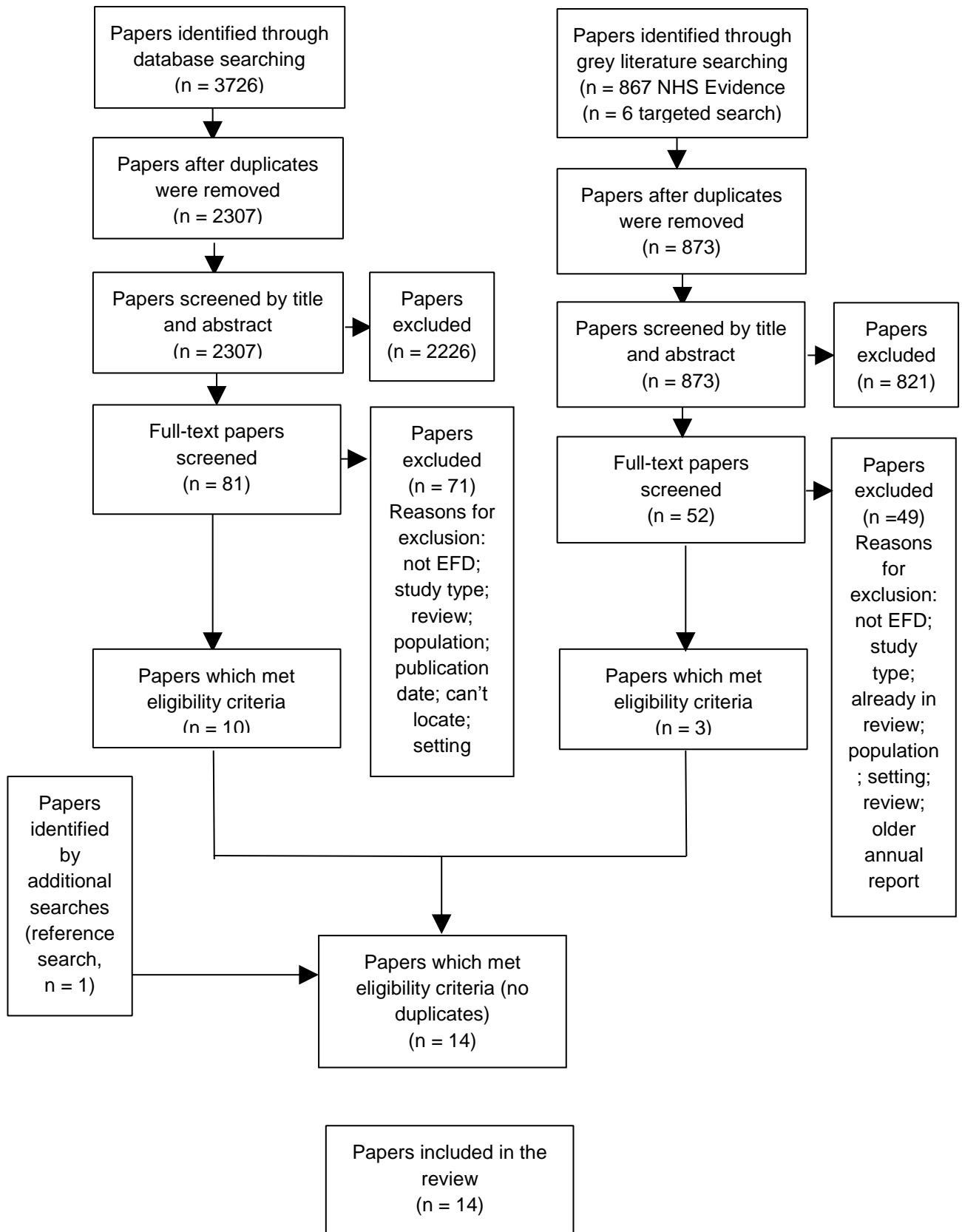
874 Sandelowski, M., Barroso, J., Voils C. (2007) Using Qualitative Meta-summary to
875 synthesize qualitative and quantitative descriptive findings. *Research in Nursing &*
876 *Health*, 30(1), 99-111. <https://doi.org/10.1002/nur.20176>

877
878 Sands, N., Elsom, S., Marangu, E., Keppich-Arnold, S. Henderson, K. (2013) Mental
879 Health telephone triage: Managing psychiatric crisis and emergency. *Perspectives in*
880 *Psychiatric Care*, 49, 65-72, <https://doi.org/10.1111/j.1744-6163.2012.00346.x>
881
882 Shumway, M., Alvidrez, J., Leary, M., Sherwood, D., Woodard, E., Lee, E.K., Hall,
883 H., Catalano, R.A., Dilley, J.W. (2012). Impact of capacity reductions in acute public-
884 sector inpatient psychiatric services. *Psychiatric Services*, 63(2), 135-141.
885 <https://doi.org/10.1176/appi.ps.201000145>
886
887 Simpson, A., Flood, C., Rowe, J., Quigley, J., Henry, S., Hall, C., Evans, R.,
888 Sherman, P., Bowers, L. (2014) Results of a pilot randomised controlled trial to
889 measure the clinical and cost effectiveness of peer support in increasing hope and
890 quality of life in mental health patients discharged from hospital in the UK. *BMC*
891 *Psychiatry*, 14, 30. <https://doi.org/10.1186/1471-244X-14-30>
892
893 Sjölie, H., Karlsson, B., Kim, H. (2010) Crisis resolution and home treatment:
894 structure, process and outcome- a literature review. *Journal of Psychiatric and*
895 *Mental Health Nursing*, 17(10), 881-892. [https://doi.org/10.1111/j.1365-](https://doi.org/10.1111/j.1365-2850.2010.01621.x)
896 [2850.2010.01621.x](https://doi.org/10.1111/j.1365-2850.2010.01621.x)
897
898 Steffen, S., Kösters, M., Becker, T., Puschner, B. (2009) Discharge planning in
899 mental health care: a systematic review of recent literature. *Acta Psychiatrica*
900 *Scandinavica*, 120, 1-9. <https://doi.org/10.1111/j.1600-0447.2009.01373.x>
901
902 Thomas, J., & Harden, A. (2008) Methods for thematic synthesis of qualitative
903 research in systematic reviews. *BMC Medical Research Methodology*, 8(45).
904 <https://doi.org/10.1186/1471-2288-8-45>
905
906 Tricco, A.C., Antony, J., Zarin, W., Striffler, L., Ghassemi, M., Ivory, J., Perrier, L.,
907 Hutton, B., Moher, D., Straus, S.E. (2015) A scoping review of rapid review methods.
908 *BMC Medicine*, 13(224). <https://doi.org/10.1186/s12916-015-0465-6>
909
910 Tulloch, A.D., Khondoker, M.R., Thornicroft, G., David, A.S. (2015) Home treatment
911 teams and facilitated discharge from psychiatric hospital. *Epidemiology and*
912 *Psychiatric Sciences*, 24(5), 402-414. <https://doi.org/10.1017/S2045796014000304>
913
914 Vigod, S., Kurdyak, P., Dennis, C-L., Leszcz, T., Taylor, V., Blumberger, D., Seix, D.
915 (2013) Transitional interventions to reduce early psychiatric readmissions in adults:
916 Systematic review. *British Journal of Psychiatry*, 202, 187-194.
917 <https://doi.org/10.1192/bjp.bp.112.115030>
918
919 World Health Organisation (WHO) (2013) Mental Health Action Plan 2013-2020,

920 Geneva, WHO Press. http://www.who.int/mental_health/publications/action_plan/en/
921
922 Wright, N., Rowley, E., Gregoriou, K. (2015) From admission to discharge in mental
923 health services: a qualitative analysis of service user involvement. *Health*
924 *Expectations*, 19, 367-376. <https://doi.org/10.1111/hex.12361>
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927 Figure 1 PRISMA flow diagram (Liberati et al., 2009)

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970 **Table 1 Summary of included studies**

Author, Year, Location	Design/ methods	Study Aim/ Focus	Sample	Methodological Appraisal (MMAT)
National Audit Office 2007 Morgan et al 2007 Morgan & Hunte 2008 UK	Mixed method national audit: interviews, focus groups and service data	To evaluate CRHT service design and delivery.	Service data from 25 sites delivering CRHT in England 6 focus groups n=25 ward managers	Thematic analysis of qualitative data is not fully outlined. Quantitative methods of data analysis from service data not outlined. Uses retrospective data. No mixed method synthesis.
Carpenter & Tracy 2015 UK	Qualitative semi-structured interviews	To explore the opinions of typical home treatment sample to inform future provision of care and patient relevant outcome markers.	n=10 people with experience of CRHT n=3 of the sample (30%) were early discharges	Not possible to extract data specific to the participants receiving an early discharge. Unclear how the interview schedule was derived. Themes have been informed by the interview schedule as well as the data suggesting a lack of depth of analysis or a lack of data.
Desplenter et al 2010 Belgium	Observational quantitative	Analysis of the profile of people receiving a discharge management intervention.	n=351 patient received discharge intervention	Limited by missing data particularly discharge destination. Not clear if those reported as 'single' were living alone. Lack of control group provides no comparison data. Measurement approach developed through previous survey and literature review reported elsewhere.
Gaynes et al 2015 USA	Qualitative interview study [Systematic review data not included]	Strategies to reduce psychiatric readmissions	n=8 key informants with expertise in the field	Sampling approach based on availability of key informants. Aimed to clarify findings from a systematic review and findings therefore limited as standalone data. Limited data produced, analysis not fully described.
Kingsford & Webber 2010	Historical cohort study	The focus of the study was on the relationship between social deprivation and successful outcomes from CRHT.	n= 260 referrals to one locality CRHT January 2006 to July 2007.	Sampling limited to one geographic area and may not be representative. Reliance on historical data, no control. Relied on accuracy of health data. Some proxy measures drawn from national data used which may not be reliable. Some data grouped for analysis which may have missed some detail in the findings. Some missing data. No follow up of the cohort.
Kusaka et al 2006 Japan	Quasi-experimental service evaluation	To establish if a critical care pathway on acute wards facilitated early discharge or impacted on nursing job satisfaction.	Intervention hospital A- n=200 nurses Control hospital B- n=30 nurses	Naturalistic approach to sampling and selection of study sites resulting in small sample size with some attrition, sample characteristics not clear. Unclear if there is contamination between control and intervention. No blinding or randomisation. Analysis and findings are not clearly reported. Findings should be viewed with caution.
Lawn et al 2008 Australia	Mixed method service evaluation	Evaluate the impact of a pilot peer supported early discharge service	n=41 early discharges Case note data from all referrals to the service between June and August 2006.	Economic analysis is limited by lack of comparator. Evaluation time frame was short and the sample small with no longer term follow-up. Unclear number of carers interviewed. Qualitative data collected from appropriate sources using personal stories, telephone interviews and focus groups but the analysis of these is not outlined leaving the data descriptive and lacking in interpretation. Quantitative data drawn from retrospective records and the sample size is not large enough to draw conclusions.
Niehaus et al 2008 South Africa	Observational quantitative	Evaluation of the impact of crisis discharges on readmission rates in one South African Psychiatric Hospital in 2004	n=438 male inpatients with acute psychosis	Regression analysis does not include diagnostic, demographic or social variables. Some missing data related to hospital readmissions outside study area.
Rhodes & Giles 2014	Qualitative interview	To provide an overview of CRHT services, policies and practices in one region of	n=8 CRHT service managers and team leaders	Unclear how many interviews were conducted and the characteristics of the participants is not reported. The thematic

UK		England To identify the main differences between different CRHT providers/localities	3 sites selected for in-depth interview	analysis was conducted on service summaries by three researchers to increase trustworthiness of findings.
Robin et al 2008 France	Prospective, comparative 5 year cohort study.	Impact of service user choice of three interventions (hospital, brief hospital with ambulatory care, or ambulatory care) on number and length of admissions over 5 years compared to a control group.	All referrals into acute mental health service Jan 1994- Jan 1995 approached for inclusion resulting in; Total sample n= 264 Intervention n=68 (Hospitalised n=15; brief hospital+ ambulatory care n=24; ambulatory care n= 29) Control n=196	Limited by exclusion of people with unstable living situation, homelessness or legally detained. Intervention arm smaller than control. Intervention sample divided across three interventions for analysis, resulting in very small sample sizes for each intervention. Unclear if any of the sample had more than one diagnosis. Long follow up.
Shumway et al 2012 USA	Observational Quantitative (natural experiment)	Test the hypothesis that reductions in acute psychiatric bed capacity are associated with negative impacts on patients and the community.	Pre- intervention- n=8546 admissions Phase 1 post intervention- n= 3069 admissions Phase 2 post intervention- n=4215 admissions	Sample taken from one service and includes only those with no health insurance. Follow up period is short. Interventions used to reduce length of stay not described or measured. Length of stay includes patient stays on acute and sub-acute wards. Outcome measures are not fully reported. Retrospective health data drawn from departmental health records and public data accessed for jail assessments and suicides.
Tulloch et al 2015 UK	Observational quantitative	Four aims: Document the proportion of all home treatment episodes that are facilitated discharges Explore the variables associated with being treated with facilitated discharge Test hypothesis that facilitated discharge would reduce the number of bed days within the admission Test the hypothesis that facilitated discharge would reduce the rate of readmission	Total sample n=7891 Early discharges n=4351	Retrospective data limited by accuracy and completeness of health records. Missing data at discharge. Important variables not included, such as those who decline intervention, dropouts and adverse events. Large sample limited to one city. Sample drawn from datasets held with public research case registers. A second analysis used data from all hospitals stays ending with a discharge from one of the borough general psychiatric wards.

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973 **Table 2 Summary of Population Data**

Author and year	Total sample	Number early discharges	Mean age (Years)	Median age (Years)	Male %	Female %	White %	Non-white %	Psychoses %	‡ Mood and anxiety %	Personality disorders %	Substance use problems %	Other diagnoses %	Living alone %
Carpenter & Tracy 2015	n=10	n=3	Sample- 42 EFD- 45	Sample- 46 EFD- 53	Sample- 40 EFD- 33	Sample- 60 EFD- 66			Sample- 50 EFD- 33	Sample- 20 EFD- 66	Sample- 20 EFD- 0	Sample- 10 EFD- 0		
Desplenter et al 2010	n=1306	n=351		45.4	54	46			17.6	23.6	6.5	34.2	16.1	Living with others 48.5
Kingsford & Webber 2010	n=260	n=65	41.94		44.6	55.4	75.4	6.9						22.3
Lawn et al 2008	n=49	n=41		36.5	26.5	73.5			73 †					59.2
Niehaus et al 2010	n=438	n=180	32.9		100%				54.7	15.3		38.9 (comorbid)		77
Robin et al 2008	Total n=264 Interventions n=68 Control n=196	n=24 (brief hospital + ambulatory care)	Intervention 37.8 Control 40.4		Gender ratio m/f intervention 1.0 Control 0.78.				Intervention 17.8 Control 20.4	Intervention 25.8 Control 19.9	Intervention 25.8 Control 34.7	Intervention 22.6 Control 13.8	Intervention 6.8 Control 12.4	Intervention 13 Control 17.3
Shumway et al 2012	Pre-test n=8546 Post test 1 n=3069 Post test 2 n=4215		41			34								
Tulloch et al 2015	n=7891	n=4351	39.1		56	44	51	37	54	25 (common MH problem)	6	11	5	

No population data provided in Gaynes et al., 2015; Kusaka et al, 2006; Morgan et al 2007; Morgan & Hunte 2008; National Audit Office 2007; Rhodes & Giles, 2014
 † Unspecified number had more than one diagnosis, ‡ includes bipolar disorder.

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976 **Table 3 Summary of study outcomes and findings**

Author, year	Outcome Measure & Tool	Findings
National Audit Office 2007 Morgan et al 2007 Morgan & Hunte 2008	National evaluation of CRHT against UK published CRHT standards	Estimated that 40% of inpatients are discharged earlier due to CRHT involvement. CRHT are likely to be involved in discharge decisions for half of all inpatients. Some discrepancies in the communication of discharge data between CRHT and wards. There may be increased pressure on carers when people are treated at home, most people prefer home treatment but some ask for an interim option such as day hospital. Decisions involved person and their carer in 81% of cases although this was less for people legally detained and was more focused on admission than discharge. CRHT increased choice, decreased stigma but may struggle to meet demands. There were concerns that ward staff may experience skills attrition. Economic review estimated a £600 cost saving per referral due to CRHT, not attributed to early discharge.
Carpenter & Tracy 2015	Thematic analysis of 10 transcribed semi-structured interviews of between 10 and 50 minutes using a 13 item interview schedule.	Choice of time for visits and consistency in staff visiting and their approach were helpful. Having someone to talk to across 24 hours was useful although some staff were too focused on the here and now and medication with little attention to the causes of the crisis. Most preferred home treatment to hospital although some noted the lack of peer support that was available in hospital.
Desplenter et al 2010	Demographic and diagnostic profile of those receiving a discharge intervention. Description of discharge management process including screening, meetings and discharge date.	Missing data on discharge destination in 27.8% of the sample. 91.3% of people screened for risks in the discharge process at admission and 26.9% received a discharge intervention. GAF scores showed that people with highest impairment and lowest functioning were screening into the intervention. Collaborative discharge planning between person, caregiver, hospital and other agencies improved the discharge process. The discharge plan should be initiated at admission and the person should be discharged as soon as the reason for admission is resolved.
Gaynes et al 2015	Summary of group interviews with key informants related to findings from a systematic review.	Early discharges rely on longer term planning and the availability of services. Unstable home situation is linked to longer hospital stay and readmission. People with lower socioeconomic status, living in poverty, uninsured or homeless have shorter hospital stays and multiple admissions. Longer hospital stays are associated with job and housing loss.
Kingsford et al 2010	Primary outcomes are successful CRHT defined by referral/discharge back to community team and unsuccessful outcomes defined by hospital admission from CRHT or within 28 days of discharge from CRHT and readmissions within 28 days to CRHT.	The percentage of successful CRHT outcomes for early discharge were similar to intake and out-of-hours services, this was grouped for analysis and labelled 'non-enhanced' intervention. Social deprivation was associated with 'enhanced' intervention group and so conclusion drawn that living in the most deprived areas decreased the odds of receiving any 'non-enhanced' intervention. Statistically significant association between increasing age and unsuccessful CRHT outcomes. Non-significant trend towards women to have more successful outcomes than men.
Kusaka et al 2006	Brief Psychiatric Rating Scale Standard Assessment of Insight-Japanese version Job Satisfaction Length of hospital stay	Large reductions in average length of stay noted in the intervention and smaller reductions in the control. Outcomes from BPRS and SAI-J are reported as neurological symptoms which are reported to have improved over time but do not reach statistical significance. Job satisfaction improved for nurses in the intervention.
Lawn et al 2008	Self reported service user and carer experience Admission, re-admission and rates of early	300 bed days were saved across the duration of the pilot. Service users and carers reported positive experiences of

	<p>discharge Bed days saved and service costs Peer worker self reported experience and feedback</p>	<p>the service. Professionals reported positive experiences of the service. Peer support workers reported positive experiences of the role as well as to their own wellbeing.</p>
<p>Niehaus et al 2008</p>	<p>Crisis discharges, length of stay and time to readmission were the main predictors. Demographic and diagnostic characteristics</p>	<p>Crisis discharges are only used when the wards are full and there are referrals waiting for admission. Mean LOS for all patients 43.9 days, crisis discharges 40.6 days and usual discharges 46.4 days. Crisis discharges were more likely to be readmitted (45%) than usual discharge (31%) and the time to readmission was shorter for the crisis discharge (628 days) and usual discharge (688 days).</p>
<p>Rhodes & Giles 2014</p>	<p>Phase 1: the configuration of the service; policies and practices; team composition; services provided; clinical assessments; and how caseloads, gatekeeping and referral pathways are managed. Phase 2: identity and purpose; gatekeeping; early discharge; out-of-hours cover; referrals; role of psychiatrist; risk assessment and management; multidisciplinary working, relationships with other parts of the service; care plans and care coordination; confidentiality; serious untoward incidents and safety issues.</p>	<p>Team tensions and differences in working models cause delays in the discharge pathway. Different teams disagreed about levels of risk causing delays. Early discharges were sometimes difficult to achieve because of blocks in the pathway. This was because of difficulties discharging from CRHT to CMHT but also because of a lack of beds on acute wards. Identified successful models are built on collaboration and mutual trust between wards, CRHT and CMHT teams.</p>
<p>Robin et al 2008</p>	<p>Demographic characteristics Diagnosis Admission status during first 4 days from referral into the service Cumulative bed days prospectively over 5 years</p>	<p>The intervention group (n=68) had shorter hospital stays at first contact, and short re-admissions of less than 7 days were double that of the control. Overall, receiving the intervention resulted in fewer days in hospital over 5 years than the control. Findings did not reveal which patients benefitted from the intervention based on demographic and diagnostic data.</p>
<p>Shumway et al 2012</p>	<p>Global Assessment of Functioning (GAF) Length of stay Readmission rates Ward days closed to admissions Suicide rates Jail assessments Discharge destination</p>	<p>Bed reductions had no effect on readmission rates, length of stay reduced, number of days ward closed to admissions reduced, the number of discharges stayed stable over time and improvement in GAF scores reported between admission and discharge. There were increases in referrals to state hospitals, hotels and shelters.</p>
<p>Tulloch et al 2015</p>	<p>Associations of being treated with facilitated discharge against 14 demographic, admission and diagnostic variables, with receipt of facilitated discharge as the outcome measure. Effects of facilitated discharge on readmission Effect of facilitated discharge on bed days.</p>	<p>Half of all inpatients were considered for facilitated discharge and 29% were discharged early. Of these, 51.6% were discharged the same or next day, this accounted for 36% of home treatment activity related to 12179 episodes. Length of stay was reduced by 4 days and with no difference in readmission rates between those who received an intervention and those who did not. When compared to schizophrenia, those with personality disorder or drug and alcohol problems were half as likely to receive a facilitated discharge. Modestly lower odds of facilitated discharge were reported for men, non-psychotic disorders, previous long hospital stay, previous discharge to community team (CMHT), discharge to care home. HONOS scores with modestly lower odds of facilitated discharge are drug and alcohol problems, problems with living conditions, relationships and physical health. Modestly higher odds of receiving a facilitated discharge were reported for people with bipolar disorder or mania, home treated in previous 2 years, married, separated or divorced and HONOS scores showing hallucinations, delusions, depression and self harm.</p>

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983 **Appendix 1: Search strategy**

984 The searches have been written up for MEDLINE using the EBSCO interface and
985 are detailed below.

986 Explanation of search terms used: ti = title field; ab = abstract field; / = MeSH; exp. =
987 explode MeSH; asterisk = denotes any character; "" = phrase search; N4 =
988 adjacency within four words.

- 989
- 990 1. earl* N4 discharg*.ti,ab
 - 991 2. expedit* N4 discharg*.ti,ab
 - 992 3. facilitat* N4 discharg*.ti,ab
 - 993 4. assisted N4 discharg*.ti,ab
 - 994 5. accelerat* N4 discharg*.ti,ab
 - 995 6. support* N4 discharg*.ti,ab
 - 996 7. home* N3 treat*.ti,ab
 - 997 8. crisis* N3 treat*.ti,ab
 - 998 9. "crisis resolution".ti,ab
 - 999 10. home care services/
1000 11. or/1-10
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 - 1002 12. ward*.ti,ab
 - 1003 13. hospital*.ti,ab
 - 1004 14. acute N3 care.ti,ab
 - 1005 15. "secondary care".ti,ab
 - 1006 16. "mental health trust*".ti,ab
 - 1007 17. inpatient*.ti,ab
 - 1008 18. in-patient*.ti,ab
 - 1009 19. hospital units/
1010 20. patients rooms/
1011 21. hospitals/
1012 22. hospitals, psychiatric/
1013 23. secondary care/
1014 24. secondary care centers/
1015 25. inpatients/
1016 26. or/12-25
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 - 1018 27. "mental health".ti,ab
 - 1019 28. "mental illness".ti,ab
 - 1020 29. "mentally ill".ti,ab
 - 1021 30. "mental disorder*".ti,ab
 - 1022 31. "mental wellbeing".ti,ab
 - 1023 32. "mental well-being".ti,ab
 - 1024 33. "mental ill health".ti,ab
 - 1025 34. "mental ill-health".ti,ab
 - 1026 35. psychiatr*.ti,ab
 - 1027 36. psycholog*.ti,ab
 - 1028 37. mental health/
1029 38. mental health services/

1030 39. exp. mental disorders/
1031 40. geriatric psychiatry/
1032 41. psychology/
1033 42. psychology, clinical/
1034 43. or/27-42
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1036 44. 11 and 26 and 43
1037 45. 01/01/2006-31/03/2016

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1040 **Appendix 2: list of items used in data extraction tool**

Study details
1. First author
2. Year
3. Study type
4. Study design
5. Study aims
6. Any further research questions addressed
7. Location of study, country & city
8. Study date and duration
9. Methods of data collection
10. Analysis used
11. Strengths/limitations of study
Service design
12. Aim/purpose of service
13. Staffing and staffing configuration
14. How service delivered in the service infrastructure
15. Service innovations and barriers
Patient population data - indicate with asterisk if data is aggregated
16. Age at admission
17. Gender
18. Ethnicity
19. Marital status
20. Dependent children
21. Housing situation
22. Employment status
23. Reasons for admission/primary presenting problem/diagnosis
24. Clustering tool outcome
Intervention/s
25. Descriptions of the interventions delivered as part of early discharge
26. Who delivered the interventions part of early discharge
27. Outcomes measures used related to the interventions above
28. Details of outcomes/findings related to the interventions above
Admission/discharge process
29. Source of admission
30. Legal status of the person during admission and discharge
31. Total numbers of admissions and discharges not associated with early discharge
32. Length of stay for early discharge patients as compared to non early discharge
33. Length of stay adjusted to exclude leave of absence
34. Number of patients considered for early discharge
35. Number of patients receiving early discharge intervention
36. Number of days between referral for consideration for early discharge and early discharge
37. Bed days between acceptance to early discharge and early discharge
38. Total number of patients who experienced delayed early discharge
39. Number of bed days of delay in early discharge
40. Reasons why early discharge was delayed

41. Early discharge destination (e.g. home, new accommodation, supported care)
Recovery outcomes post early discharge
42. Symptom management/improvement in mental health
43. Quality of Life
44. Physical wellbeing (e.g. BMI, smoking)
45. Social functioning (e.g. parenting, family, relationships, employment, housing, and finance)
46. Safety/risk
47. Psychological (e.g. self-esteem, mood, motivation, insight, behaviour)
48. Standard recovery measures (e.g. HONOS)
Adverse events post early discharge
49. Suicide attempts and self-harm
50. Completed suicide or death by other cause
51. Criminal behaviour resulting in custody
52. Violence and aggression (reported by carers or professionals, police involvement)
53. Readmission within 28/30 days
54. Loss of contact with services
Experience and acceptability of the early discharge intervention
55. Informal carer/family member views and experiences of early discharge
56. Professional and support staff views and experiences of early discharge
57. Patient reported experience of early discharge
Economic evaluation
58. Costs associated with early discharge
59. Costs of early discharge compared to conventional longer stay
60. Costs compared to other forms of crisis care
Theory development
61. Theoretical frameworks/concept models proposed or discussed
Further relevant data
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