EVIDENCE-SCOPING REVIEW - SERVICE TRANSITIONS FOR MENTAL HEALTH AND ADDICTION

Report for the Health Quality & Safety Commission

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1. **INTRODUCTION**

This is a summary of evidence of factors that affect service transitions for those using mental health or addiction services. The overarching question is:

What factors inhibit or facilitate service transitions for consumers of mental health or addiction services?

The review addresses two main objectives:

1. to define and categorise factors that inhibit service transitions for consumers of mental health or addiction services.
2. to explore published literature concerning interventions aimed to improve service transitions for consumers of mental health or addiction services.

This evidence review was commissioned by the Health Quality & Safety Commission as a part of scoping for the mental health and addiction quality improvement programme. This programme has five streams of work. One of these streams is focused on improving service transitions.

This review looks at the literature within two broad domains. Firstly, it explores the factors that affect service transitions. Secondly, it reviews intervention studies that have attempted to improve service transitions.

1.1 **The search method**

We were guided by the Cochrane method in developing this scoping review (1). Online searches were performed within the US National Library of Medicine (PubMed) using the following search terms:

- consumer OR patient OR client
  
  AND

- transition OR transfer OR journey OR pathway OR continuity
  
  AND

- mental health OR addiction AND service.

We limited the search to empirical studies conducted between 2007 and 2017 written in the English language. To ensure the applicability of the results to the New Zealand context, we restricted the scope of included studies to those conducted in health systems of developed nations.

We restricted the search to randomised controlled trials, quasi-experimental studies and service audit studies. Relevant original qualitative studies, and narrative and systematic literature reviews were also included.

Following the recommendations for Cochrane reviews, we included all studies focusing on the interventions that reported either primary or secondary outcomes. The primary outcomes were:
• duration of hospitalisation
• relative risk of re-hospitalisation
• number of days to readmission
• rate of consumer withdrawal from mental health services.

1.1.1 Search results

The aim of this review was to explore the evidence on service transitions within both mental health and/or addiction services. Applying the Cochrane method outlined above led to no references for the addiction service\(^1\). Consequently, the rest of this review applies only to evidence drawn from research in the mental health setting.

The initial search retrieved 879 titles, with each step in the review process illustrated in Figure 1 below. Following the title reading, we excluded the titles with low relevance, such as articles with exclusively clinical focus (medication effectiveness; clinical management), editorials, guidelines, study protocols (added to ‘background literature’ for further snowballing search), non-English studies, and studies focused on the context of developing countries.

The remaining 307 articles were retained for abstract reading, which resulted in a further exclusion of 217 papers with limited relevance. A total of 90 articles were saved for full paper reading and further filtering. A sample of 39 articles was retained for inclusion and summarised. During the literature synthesis an additional 6 articles were located using the snowballing technique and included in the synthesis, resulting in a final sample of 45 articles.

\(^1\) The search strategy provided no useable results for transition within addiction services, or across addiction and mental health services. This is not to say that there are no transitions within or across addiction services. Rather, the issue is not of enough prominence to generate peer reviewed research on the matter that meets the eligibility criteria for the search strategy applied. It may well be that a method that focuses on more of a qualitative approach, drawing on the grey literature, may identify evidence on service transitions that come from the addition sector.
1.2 What do we mean by transition?
Service transitions in the mental health and addiction context is a complex area of investigation. To help understand the complexity it is useful to frame it from a systems perspective. Figure 2 shows the relevant components of the system for service transfers.
Figure 2. The system of service transitions
There are three systems that are relevant.

1. The first relates to interactions and transitions across primary, community, secondary, tertiary, and forensic mental health services. This is central to the acuity of the condition and the pathway to resilience and recovery. Within this system there are four transition points that are critical. This relates to transition to specialised service (either from home or primary care). Research identifies that the time taken to access specialised care is a marker of quality and improved outcomes (2,3). This specialised care may be either in the community (transition 1), or as an inpatient (transition 2). As the person builds resilience and recovery then there are transition points from hospital care to specialised community care (transition 3), and from community care to primary care or self-care (transition 4). There is an evidence base about the factors that affect these transitions as a person becomes well, and evidence on the interventions that support these transitions.

2. The second system issue relates to the age of the individual (children, adults, older adults). The health system in NZ is divided up into paediatrics, adult services, and older adult services. Each of these areas have different approaches and resources, and represent another area of transition for a person. As people age they move from one service to another - affecting the nature of the service received.

3. The final system that affects transition is the organisational system. This relates to interactions within the four levels of the health system: the person, the health professional, the service, and the health administration system.

These three aspects were used to frame up the following evidence review.

2. **Evidence Review**

This review looks at the evidence in three broad areas:

1. the factors that affect the efficiency and effectiveness of transitions
2. the transitions across services based on the person’s age
3. the interventions to improve transitions.

In this section we discuss the evidence in detail, highlighting findings and limitations. We conclude by synthesising the evidence presented.

2.1 **Person-, service-, and system-level factors affecting the efficiency of transitions**

Interaction effects between the characteristics of the person, the service, and the administrative system can impact on the quality of service transitions (Figure 3). A high-level summary of the evidence regarding person-, service-, and system-level factors is presented in Table 1 (Appendix 1). The table identifies the country, study aims, design,
and key outcomes of the studies. It also has a column that identifies where in the service transition pathway the study is located.

**Figure 3. The interplay of factors that impact on service transitions**

2.1.1 **Individual level**

It has been confirmed in multiple independent studies that when it comes to serious mental illness (SMI), consumer pathways to specialised mental health services may have a significant impact on treatment outcomes (2,3,5-7). One of the major factors that may impact long-term clinical prognosis is related to a period of time between the onset of a first episode psychosis and treatment initiation. The time between these events is commonly referred to as duration of untreated psychosis. A negative relationship between duration of untreated psychosis and long-term clinical outcomes has been widely documented (2,3).

There are several person characteristics that affect the time taken to get to specialised care. These characteristics include ethnicity, socioeconomic position and clinical status.

2.1.1.1 **The role of ethnicity**

Singh et al. (4) conducted a systematic review of the literature concerning the relationship between ethnicity and detention as a pathway to psychiatric care. They discovered that Black, Black and minority ethnic, and Asian consumers were 3.83, 3.35 and 2.06 times more likely to enter psychiatric care through a coercive pathway, respectively. The authors pointed out that possible explanations could include
discrimination and misdiagnosis as well as higher incidence of psychosis among those groups.

In a more recent study, Rotenberg et al. (8) investigated clinical pathways taken to emergency mental health care by ethnic minorities in Toronto, Canada. The study confirmed that consumers of East and South Asian origin were more likely to enter emergency psychiatric care through the criminal justice system compared to White Canadians. The results of this study are consistent with previous reports, suggesting that in general, ethnic minorities bear greater risk of coercive admissions (9). Admissions through this pathway are associated with a lack in the satisfaction of care, lack of engagement and adherence to treatment, and as a result, poor clinical outcomes (5-7).

Ethnic disparities are also evident in community-based early intervention services. Such systems are common in Western health systems, and play a significant role in treatment and recovery. Consumers can enter these services either after hospital discharge or via GP referrals, thus avoiding potentially unnecessary hospitalisation (1). Anderson et al. (1) compared pathways to this service among Black-African, Black-Caribbean and White Canadians. The authors reported increased odds of a post-admission pathway among Black-Caribbean and Black-African Canadians.

The adverse pathways for ethnic minorities have been linked to a lack of prior engagement with general practice (5,7), resulting in poorer clinical outcomes.

### 2.1.1.2 The role of sociodemographic characteristics

Gender and socioeconomic status affect transitions to and from mental health services. Ramos et al. (10) compared sociodemographic characteristics of consumers who entered inpatient psychiatric care either directly through an emergency department or through a referral from community providers, including GPs and private psychiatrists. They found that those referred were more likely to be female, employed, and having a higher household income.

This theme is also found in referral to community-based early intervention services. Tsiliou et al. (11) explored gender differences in a pathway to early intervention services as well as comparative outcomes after one year of an intervention. No differences were found in terms of duration of untreated psychosis or admission pathways to early intervention.

### Key findings

- Ethnic minorities more likely to have poorer engagement with GPs - leading to an increased rate of readmission.
- Gender (male), unemployment, and low-income are predictors of not accessing specialist mental health services.
- Not accessing a GP post discharge is more likely if the person is male, low income, or living in a non-urban area.
- Help-seeking behaviours speed up access to specialist mental health services.
- A history of prior admissions to acute mental health is a predictor of re-admissions and an increased duration in specialist care.
services. It was documented, however, that males were more likely to express violent behaviour before admission, while females were more likely to attempt suicide. Within a year with early intervention services females were also more likely to be readmitted to inpatient psychiatric care.

The impact of sociodemographic factors on consumer transitions has also been demonstrated for non-psychotic spectrum disorders. In a large retrospective cohort study that followed 13,385 consumers suffering from severe unipolar depression, Lin et al. (12) aimed to establish which proportion of consumers had a follow-up visit to a physician within 30 days post-discharge from inpatient facilities, as recommended by policy and clinical guidelines in Ontario, Canada. The study revealed that only 63% of consumers had a physician visit. Consumer characteristics related to successful follow-up included female sex, and residency in urban areas or affluent neighbourhoods. Males dwelling in either low-income neighbourhoods or rural areas were the least likely to have a follow-up visit. A significant one-fourth of the study sample were either re-hospitalised or admitted to emergency departments (ED) within 30 days post discharge.

2.1.3 The role of help seeking and prior admissions

Help-seeking behaviour on behalf of consumers experiencing first episode psychosis is associated with differences in pathways to care and care outcomes. Reasons for delays in care initiation related to help-seeking behaviours were explored by O’Callaghan et al. (13) in a study of pathways towards early intervention services in Ireland. It was established that many consumers (60%; 85 consumers from a sample of 142 cases) did not seek help themselves, whereas family members were involved in help-seeking in 51% cases (73 cases). Twenty-seven percent (38 people) of consumers and their families did not seek help. Consumers who had better premorbid adjustment2 and consumers who experienced depressive symptoms were more likely to seek help.

2.1.4 Clinical factors

Not only the entry pathways, but consecutive admissions can also be influenced by clinical factors. Ramanuj et al. (15) conducted a retrospective cohort study to determine whether a transfer of consumers suffering from SMI from secondary community-based mental health services to primary care results in increased subsequent use of acute mental health services. The study followed a cohort of consumers (N=98) who were either discharged to primary care due to clinical improvement (N=6) or transferred to another community mental health team (N=92). The study took place between 2006 and 2011 in South London, UK.

There was no difference in the rates of readmission for those in either of the two pathways. Neither did sociodemographic factors account for those readmitted. An increased risk of re-referral in both cohorts, however, was associated with an episode of

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2 The term premorbid adjustment refers to an individual's sociability, peer relationships and academic performance prior to disease onset. A number of studies explore the links between premorbid adjustment and prognosis in psychotic disorders (14).
admission to acute mental health care during the two years before service transition. Prior admissions were also associated with increased duration of specialist care after either discharge or a transfer. Ramanuj et al. concluded that prior admissions to acute mental health care need to be systematically considered before discharge.

2.1.2 Service level

Access to the appropriate level of service in a timely manner is a key consideration when developing a system that supports effective and efficient transfers. Evidence shows that sharing consumer information across services, access to a general practice soon after discharge, and the role of community pharmacy are key considerations in supporting consumers as they transfer across services.

2.1.2.1 The role of primary care

Alongside specialised services, general practitioners play a significant role in the care for consumers suffering from severe (SMI) and common mental illness (CMI) (16,17). To ensure seamless transitions between specialised mental health services and general practices, the latter need to be able to access information about their consumers’ journey and clinical status. This is referred to as informational continuity of care, which alongside other factors ensures continuity of care in mental health (18).

Norton et al. (16) conducted a survey of 121 consumers diagnosed with first episode psychosis and discharged from inpatient psychiatric facilities and into the care of GPs (N=63) in Montpellier, France. GPs adjusted or renewed psychiatric prescriptions in 18.5% cases. The length of hospital stay was associated with both the frequency and nature of consequent GP visits. Consumers with shorter stays consulted their GPs more frequently, and their visits were more likely to be related to psychiatric problems (42.9% versus 17.4% in longer stays). The study indicates that GPs play an important role in outpatient care following the first psychiatric hospitalisation and are often consulted for reasons related to the psychiatric condition.
In a cross-sectional cohort study, Reilly et al. (17) examined health service use patterns among consumers suffering from SMI in England. Data on a total of 1,150 consumers was collected across 64 general practices. It was discovered that one-third of consumers with a diagnosis of SMI received care exclusively from their general practice. When it came to informational continuity of care, the outcome of the referral was not recorded by a referrer (general practice) in 28.7% cases. As for consumers discharged from mental health services, 8.1% were failed to be followed up by general practices or failed to attend their appointment for unknown reasons. For those that did have a follow up with their GP, 14.9% of consumers did not have a clinical record providing a reason for discharge. The study indicates that although primary care practices play a significant role in caring for consumers diagnosed with SMI, significant gaps exist in continuity of care, particularly when it comes to follow-up visits and information exchange between specialist mental health services and primary care practices.

While these studies emphasise the role of GPs, other primary care agencies may also help to ensure seamless transitions of consumers from inpatient to community-based care for consumers suffering from serious mental illness. Zongo et al. (18) explored the role of community pharmacies in ensuring the continuity of anti-psychotic pharmacotherapy in Quebec, Canada. Out of the cohort of 6,521 consumers, more than half (54.1%) visited more than one pharmacy for refilling prescriptions. The study confirmed that individuals who had their prescriptions filled in four or more pharmacies were 22% more likely to show low adherence to pharmacotherapy. Given the importance of treatment retention in SMI clinical management, the findings indicate the importance of community pharmacy availability and accessibility in medication follow-up.

### 2.1.2.2 Effective availability

Low availability of community-based agencies is another factor that might have an impact on cross-boundary continuity of care. Meehan et al. (19) examined clinical characteristics of consumers placed in publicly funded community- and hospital-based residential rehabilitation services in Queensland, Australia. Consumers who required ongoing residential placement (between 1 month and 13.9 years, on average 2.7 years) suffered from SMI, had a history of multiple psychiatric hospitalisations, low capacity for self-care, noncompliance to treatment, and increased risk of violent behaviour. These characteristics represent the most severe cases in the spectrum of psychotic disorders, observed in around 10% of consumers (19).

Nevertheless, almost one-third of consumers included in the study (overall N=240) were rated by staff as clinically ready for discharge, but discharge was not possible due to a lack of appropriate step-down options, e.g. independent dwelling with in home supports. Thus, Meehan et al. (19) revealed service-related reasons for a lack of clinically justifiable transitions towards less resource-demanding psychiatric care.

### 2.1.2.3 Geographical accessibility

When it comes to first episode psychosis, timely access to specialist care helps to minimise the duration of untreated psychosis, which in turn positively affects clinical outcomes (2,3). The role of geographical accessibility of inpatient and outpatient
specialist services in rural areas has been explored in a recent cross-sectional study of mental health services in Norway, conducted by Kvig et al. (20). The study revealed that half of the consumers (study sample N=62) did not receive care in a timely manner. The average delay was 4-5 months, which was far above the recommended 9.7 weeks. The distance of travel to mental healthcare facilities, including outpatient clinics and hospitals, was found to be a factor independently related to treatment delay.

A study of Veterans Affairs (VA) outpatient mental health services by McCarthy et al. (21) followed a retrospective cohort of VA clients suffering from SMI. The results indicated a small but statistically significant correlation between a longer distance to providers and lower continuity of care.

2.1.3 Organisation system level

The design considerations of the organisational system further complicate the interplay of person and service factors, leading to potential challenges in the transfer between services. The research in this domain has essentially looked at how the design supports the continuity of care, and how this affects utilisation, clinical, and cost outcomes.

2.1.3.1 Network structures

Lorant et al. (22) examined differing mental health network structures to determine which network structure and composition is associated with smoother transitions and better continuity of care. The survey on network structure was conveyed at both service (management and clinical staff) and consumer levels. Patient-level outcomes of interest included experienced continuity of care, and how well they felt they were socially integrated in their community. Continuity of care was slightly higher in large, centralised homophilous networks (limited diversity of well-connected providers). However, social integration scores were higher in consumers who received care from smaller heterophilous (greater diversity of service types) networks, particularly when social care agencies were well represented.

Myklebust et al. (23) examined utilisation of outpatient services in two structurally different mental health networks in Norway. They aimed to establish whether person- or service-level variables were more predictive of outpatient services utilisation. The networks in question included an area of Vesterålen, where the network was decentralised with a high use of outpatient clinics, and Lofoten, where the network was partly centralised with a lower use of outpatient clinics. The Lofoten area was

Key findings

- Networks of organisations that are small but well connected support the continuity of care, leading to efficient and effective service transfer.
- Having clinicians that work across inpatient and community-based services aids the continuity of care and improves the quality of transfer across services.
- Transaction costs of transfers into community-based specialist mental health services are lower if the person is already under the care of the community services.
characterised by a ratio of 2.0 outpatient clinicians per 1,000 people, while Vesterålen had a ratio of 1.1 outpatient clinicians.

The study revealed that despite a higher ratio of outpatient clinicians available in the partly centralised network of Lofoten, consumers tended to utilise outpatient care less. Consumers hospitalised into a central hospital from Lofoten were also likely to have shorter stays. On the opposite, consumers hospitalised into a local district hospital in Vesterålen had longer stays and were more likely to utilise outpatient services, despite a lower ratio of outpatient clinicians available.

Myklebust et al. pointed out that higher outpatient services in a decentralised network of Vesterålen may be related to the fact that some physicians delivered inpatient and outpatient care to the local population, which could be conducive to a better continuity of care. In Lofoten, outpatient clinicians operated independently and could have limited opportunities for information sharing with the staff of the central psychiatric hospital in Bodo, which led to lower outpatient utilisation and presumably lower continuity of care.

2.1.3.2 Transition costs

Cheung et al. (24) compared health system costs associated with alternative pathways into specialist community care for consumers diagnosed with first episode psychosis in Alberta, Canada. Two pathways were identified: an outpatient and an inpatient pathway. The costs associated with an inpatient pathway, i.e. consumers referred either from a general or a psychiatric facility, were 18.5 times higher than those associated with outpatient referrals. The additional costs were associated with the transaction costs of moving from one system to another. Those who were outpatients were already in the community mental health system, so the transaction costs were lower.

2.1.4 Conclusion

In this section, we reviewed the studies addressing consumer-, service-, and system-level factors that affect the nature and timeliness of service transitions. Due to the clinical importance of timely access to specialised mental health care in first episode psychosis, our review located several studies concerning consumer-level factors, including ethnicity and sociodemographic factors, that affect transitions from the community to specialised care during first episode psychosis.

Transitions from inpatient psychiatric care to the community cannot be considered successful unless general practices and outpatient mental health providers are accessible and well informed about their consumers’ conditions and needs. This ensures successful independent living and prevents unnecessary future hospitalisations.

2.2 Transitions across child, adult, and older adult services

As highlighted earlier, transitions across services based on the person’s age is an important area of examination when looking at service transitions (Figure 4). Different approaches, staffing, and resources within these services affect the quality of transition. Transitions from paediatrics to AMHS adult mental health services have received
attention in the literature. This review found no relevant studies looking at transitions from adult to older adult services.

![Transition across the person’s age](image)

**Figure 4. Transition across the person’s age**

### 2.2.1 Transitions from paediatric to adult mental health services

Singh et al. (25) conducted a large-scale survey of 42 child and adolescent mental health (CAMHS) services in London, UK, to explore variations in transition protocols used to manage client transitions from CAMHS to adult mental health services (AMHS). Overall, 15 different protocols were identified and compared.

All transition protocols emphasised collaboration between agencies and information sharing, and cooperative work before a transition. Joint assessment processes were in place to determine the severity of a condition and future mental health needs as an indication for referral to AMHS. Client and family involvement in decision-making was another important principle.

**Key findings**

- Protocols on transitions to AMHS should include shared planning, the role of other agencies, and the involvement of a liaison worker.
- The particular condition of the individual should be considered in deciding the age of transition; e.g., attention deficit hyperactivity disorder, eating disorders, and intellectual disability may need an older age for transition.
- Care needs to be given to managing the reduction of family involvement and the young person’s concern of the need to mature at a rate quicker than they are.

Transition age identified in the protocols varied from 16 to 18 years old, and there were differences in considerations about whether transition was flexible. Although information sharing with AMHS was identified as important, there were differences regarding what information could be transferred; not all protocols specified whether a planning meeting between CAMHS and AMHS was necessary. The involvement of other agencies was discussed in some protocols, and in some cases, involvement of a liaison worker was mentioned. Even though client and family involvement was considered to be necessary, no protocols described how clients could be prepared for the transition.

Singh et al. concluded that although there was no significant variability in the main principles depicted in the protocols, many discrepancies and gaps were found in the descriptions of practical aspects. This may potentially cause service gaps and discontinuity of care for young adults transitioning from CAMHS.
The study by Singh et al. provides a general outlook on transition practices and possible service barriers. The studies reviewed further concern for specific groups of consumers reaching transition age, including ADHD (28), eating disorders, and intellectual disability.

Taylor et al. (26) pointed out that while in about 20% of cases the symptoms of ADHD experienced in childhood gradually subside, a significant proportion of consumers (65%) experience incomplete remission with remaining clinical impairments, while 15% remain fully symptomatic in the adulthood. A significant number of ADHD sufferers can therefore benefit from well-organised adolescent-to-adult service transitions.

Taylor et al. aimed to establish if the ongoing needs of ADHD consumers could be met after the transition to AMHS. They reported that 36% of adolescent consumers might require ongoing care from AMHS. A further 29% of adolescent consumers with less severe symptoms might need GP support, while another 29% could benefit from being monitored by a specialist nurse. Taylor et al. concluded that a large proportion of clients with ADHD would benefit from appropriately planned service transition.

A similar study was conducted by Arcelus et al. (27), who examined clinical records of 887 adult consumers of a UK-based eating disorder service with an aim to compare the characteristics of consumers who were referred from child and youth services with consumers who entered the clinic as adults. They pointed out that consumers who underwent the service transition were likely to suffer from ‘fears of maturity’ and experience a stressful transition to adult services. This could be related to the change of service ethos and expectations from the clients after the transition, which includes less family involvement and more personal responsibility. Arcelus et al. concluded that adolescents suffering from eating disorders may need better planned and more structured support during their transition to adult services, with a focus on supporting consumers with low self-esteem and fears of maturation.

2.2.2 Conclusion

Studies examining the transitions across services based on the person’s age have focused on the transition from adolescence to adult services. Nothing was found on the transition from adult to older adult services. The studies highlighted the importance of effective transition planning and communication across the services. The areas of consideration include moderating the impact of reduced family involvement and the concern amongst the young person of the need to ‘mature’ to align with the adult service.

2.3 Interventions aimed to improve service transitions

The final system of transitions is those across services as the person moves into periods of increasing ‘unwellness’, and then back to recovery and resilience (Figure 5). The research has looked at these transitions in two areas. Firstly, it has looked at interventions to improve the pathway to specialised care in the early stages of onset of mental illness. Secondly, it has reviewed a range of interventions designed to improve the process of discharge from hospital care back into the community. A high-level summary of the evidence regarding consumer-, service-, and system-level factors is presented in Table 2.
(Appendix 1). The table identifies the country, study aims, design, and key outcomes of the studies. It also has a column that identifies where in the service transition pathway the study is located.

<table>
<thead>
<tr>
<th>Transition 1</th>
<th>Transition 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Primary Care</td>
</tr>
<tr>
<td></td>
<td>Secondary/Community Care</td>
</tr>
<tr>
<td></td>
<td>Tertiary Care</td>
</tr>
<tr>
<td>Transition 3</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5. Transition across the continuum of care

2.3.1 Interventions aimed to improve pathways to specialised care

It has been confirmed that the duration of untreated psychosis negatively affects clinical outcomes, and delayed treatment initiation can have a negative impact on long-term prognosis. In the previous sections of the review we discussed person- and service-level factors that may delay access to specialised care and thus extend duration of untreated psychosis. In this section we review evidence concerning the interventions aimed to reduce duration of untreated psychosis through service improvements.

- Early intervention services in the prodromal phase may reduce the rate of hospitalisations.
- Consumer education and psychosocial supports reduce hospital readmission rates.
- The Transitional Relationship Model can reduce the inpatient length of stay and reduce readmission rates.
- A group approach to outpatient care can improve the quality of life and consumer satisfaction.
- Supported discharge programmes for youth can improve clinical outcomes, reduce hospital utilisation, and reduce costs.

Early intervention services developed for consumers who are at high risk of developing psychosis (At Risk Mental State – ARMS) may help to ensure a timely transition to specialised psychosis care, thus reducing the duration of untreated psychosis (28). It has been confirmed that around 20-35% of at-risk consumers seen by such services develop a first episode psychosis within three years (29).

It is not clear, however, whether the availability of early intervention services may be beneficial for a general population of at-risk individuals or if only certain categories of clients are more likely to access and benefit from them. The latter group of consumers may not be representative as their active help seeking and
engagement with mental health services before the onset of psychosis may indicate better social adaptation and clinical status (28).

Valmaggia et al. (30) compared the duration of untreated psychosis in early intervention consumers at risk of developing psychosis who then developed psychosis (N=228), to the duration of untreated psychosis in consumers who entered specialised care during the first episode psychosis episode through alternative pathways (N=147) and explored the differences in sociodemographic characteristics of those groups.

Consumers who had engaged with early intervention services in the prodromal stage had a much shorter duration of untreated psychosis (mean 11.2 days vs 366.5 days), were less likely to require hospitalisation (46% vs 100%) and were much less likely to enter specialised services through a coercive pathway (30% vs 74%). When it comes to consumer characteristics, prodromal consumers did not differ in terms of age, marital status or gender; however, they were more likely to be employed and referred to the service by a general practitioner.

Valmaggia et al. concluded that early intervention services aimed to assist people at risk of developing psychosis have a potential to reduce the duration of untreated psychosis, and help avoid unnecessary hospitalisations as well as coercive pathway admissions. The differences in consumer cohorts also indicate that such services may be less efficient for socially deprived groups.

A recent study on the utilisation of prodromal services by Ajnakina et al. (31) provides a critical outlook on the effectiveness of prodromal services. The authors compared different pathways taken towards specialised mental health services by 338 consumers suffering from first episode psychosis in London, UK. Only 4.1% of all consumers had prior contact with prodromal services.

Ajnakina et al. hypothesised that this finding could be related to the fact that around 77% of referrals to prodromal services were rendered by GPs, which excludes individuals who are not enrolled with a general practice; for example, individuals not seeking help or vulnerable groups including immigrants.

Another way to reduce the duration of untreated psychosis may be through interventions aimed at increasing the awareness about psychotic spectrum disorders among potential referrers.

Malla et al. (32) assessed the effectiveness of an intervention aimed at reducing the time between first contact with health, educational or social care providers, and access to appropriate services in consumers suffering from first episode psychosis in Vancouver, Canada. A Targeted Case Identification intervention was delivered as an educational film concerning first episode psychosis and benefits of early intervention. The film was delivered to primary care providers, educational providers (counselling personnel at high schools, colleges and universities) and at hospital-based emergency and mental health

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3 Prodromal refers to the phase of mental illness when the person starts to experience changes in themselves, but has not yet started experiencing clear psychotic symptoms.
departments. The investigators compared pre- and post-intervention referrals, using a historical cohort of consumers (N=136) as a control group and an intervention group of 159 consumers.

The study revealed no significant reduction in treatment delay pre- and post-interventions. However, there was a significant 17% increase in referrals for consumers suffering from affective psychosis. This indicates that the educational intervention was effective in generating more referrals for first episode psychosis consumers beside a traditional schizophrenia-spectrum diagnoses. Both pre- and post-intervention, the shortest referral to specialised services was associated with emergency hospital services, while the longest referral delay was associated with community services.

2.3.2 Interventions aimed to improve post-discharge transitions in adults suffering from severe and common mental health disorders

Vigod et al. (33) conducted a systematic review of peer-reviewed studies to describe and evaluate the effectiveness of interventions aimed to improve transitions from inpatient psychiatric facilities to community-based care, using rates of psychiatric readmissions as an outcome measure. Based on a sample of 15 original research papers, the authors found evidence that interventions based on consumer education, including disease management and living skills, are effective in reducing readmission rates. Effective interventions also included other components, such as structured post-discharge planning and needs assessment, medication education, telephone follow-up and home visits, as well as peer support.

In 1998, Forchuk et al. (34,35) developed a service transition model to support consumers leaving inpatient mental health facilities. The Transitional Discharge Model (later renamed Transitional Relationship Model or TRM) is based on two main components. First, hospital staff continue to maintain contact with discharged clients in the community, allowing the consumers to gradually build trusting relationships with community-based providers before a handover is complete. Second, discharged individuals receive peer support from fellow mental health consumers who have successfully lived in the community, which is aimed to help support social functioning and improve quality of life of all participating clients (36).

The TRM model has since been widely studied in Canadian and UK contexts, revealing a potential to bring about positive outcomes, including shortened length of inpatient stay and lower readmission rates, associated with cost-savings on a system level (36). Having said that, the model requires effective collaboration between hospital and community-based agencies, as well as coordination of volunteer support (36), which may make its implementation a challenging undertaking (37). In a more recent implementation-focused study, Forchuck et al. (37) explored barriers and facilitators associated with integration of the model into clinical practice. The authors emphasised excessive workload, disagreement between representatives of different clinical roles and over-reliance on champions as the most prominent inhibiting factors. When it comes to facilitators, readily established relationships with community providers and consumer groups were found to be beneficial, as well as positive prior experience with implementation of the model.
A different transitional model of post-discharged care named engagement-focused care (EFC) was implemented in the context of the US healthcare system, with the main goals of improving timely access to post-discharge care and addressing the shortage of outpatient providers (38). A Transitional Care Clinic was established in San Antonio, Texas, to provide a range of services for consumers suffering from severe mental illness during 90 days after hospital discharge. The services included coordinated care, medication management and psychotherapy. Two main components that differentiate the EFC model from the TRM model are an access group intake and shared decision-making.

The access group intake process allowed up to eight discharged consumers to be seen simultaneously in the clinic, which helped reduce the time between discharge and the first outpatient appointment. The process also allowed practitioners to group consumers according to their immediate needs, i.e. prescription fulfilment, and address this as soon as possible. A shared decision-making component was established to improve engagement with the care process and potentially improve overall consumers’ wellbeing and quality of life.

Velligan et al. (38) assessed the effectiveness of the model in a randomised, controlled trial against a less structured, usual approach to post-discharge care, often limited to an appointment with a prescribing physician and psychological services when required. The authors reported a positive difference in quality of life and increased consumer satisfaction among the intervention arm consumers. However, no statistically significant difference between study groups was reported when it comes to re-hospitalisation rates and ED visits.

While TRM is a model that focuses on a full spectrum of mental disorders, Rose et al. (39) studied the implementation a post-discharge transition model aimed to support people suffering from SMI, initially developed by Brooten et al. (40). The model focuses on ensuring better medication adherence post-hospitalisation, reducing the rate of re-hospitalisations and improving the quality of life of discharged consumers. It is based on comprehensive post-discharge planning, followed by psychiatric nurse-led home visits, physical and psychological examinations, as well as consumer and family support (41).

The effectiveness of a transitional post-discharge intervention focused on consumers suffering from non-psychotic disorders was explored in a retrospective register study by Nilsson et al. (41). The authors compared readmission rates and ED visits following one year after a hospital discharge. A structured 7-week programme comprised a guaranteed post-discharge consultation with a psychiatrist, followed by five sessions of individual cognitive-based therapy and eight sessions of group therapy. Apart from these core components, the programme included ongoing telephone-based support, contacts with social workers and an exercise programme. The intervention was compared with a general approach to post-discharge care, often limited to a follow-up by a single mental health professional. Nilsson et al. reported significantly lower rates of readmissions and bed days in the intervention groups following a year post-discharge; however, no difference in ED presentations was detected.
2.3.3 Interventions aimed to improve post-discharge transitions in children and youth

In a pilot evaluation study, Ougrin et al. (42) assessed the effectiveness of a UK-based transitional intervention named Supported Discharge Service. The intervention aimed to shorten the length of hospitalisations, reduce re-hospitalisation rates, and achieve better client satisfaction and cost-effectiveness of psychiatric services for children and adolescents. The intervention mainly aimed to support high-need consumers who required long-term hospitalisations and experienced barriers to discharge.

A team consisting of a child psychiatrist, support workers and nurses provided intensive case-management support to consumers pre and post discharge. The services included care coordination, medication management, psychotherapy, and education support. The time limit of the intervention was not predetermined and followed the needs of the consumers. However, the mean time consumers spent with the programme was 20.7 weeks.

The authors reported improved mental health and emotional scores following the intervention, as well as high service satisfaction scores in consumers and their family members. Although the study reported positive outcomes, Ougrin et al. pointed out that a small sample size (N=30) of the pilot intervention did not allow to draw solid conclusions on the programme effectiveness or assess a long-term impact on re-admission rates.

A similar intervention was implemented and assessed in the context of a German public health system (43). The main components of the ‘home-treatment brings inpatient treatment outside (Hot-BiTs)’ programme included early discharge from an inpatient facility, home-based medication management and psychotherapy, day hospital, and supportive therapies. The programme was based on case management approach and cooperation of clinicians, social care agencies and education providers.

The intervention proved to be equally effective in terms of clinical outcomes compared with prolonged inpatient care, while allowing much shorter inpatient stays. It also showed good acceptance among clients and their family members (43). In a separate cost-effectiveness study following a randomised clinical trial, Boege et al. (43) demonstrated that the programme was cost-effective and capable of achieving savings for the health system, compared to traditional inpatient care.

2.3.4 Interventions aimed to improve post-discharge transitions in consumer groups with special needs

The studies discussed above describe and assess post-discharge interventions aimed to assist consumers suffering from severe and common mental conditions. Our literature search also located articles describing interventions focused on specific consumer populations, such as homeless individuals (44), and parolees suffering from substance abuse problems (45).

Kasprow et al. (44) evaluated the implementation of a case-management based Critical Time Intervention programme in the US-based Veterans Affairs health system. The programme targeted homeless veterans suffering from SMI who had been discharged...
from inpatient psychiatric facilities. A transition to community care presents additional challenges to homeless individuals, as they require both timely access to outpatient providers and assistance from housing services. Hence, during the six months following a discharge, case managers provided their clients with assistance in contacting housing and treatment services and monitored clients’ interactions with those agencies. Apart from that, case managers provided psychotherapy and addiction counselling as well as living-skills training.

Kasprow et al. reported a positive impact of the intervention on the number of days the clients spent housed during a year after discharge, as well as a reduction in the number of days spent institutionalised. There was also a reduction in alcohol and drug use as well as a slight increase in the number of days worked over a follow-up period. Intervention recipients also reported significantly less psychiatric problems.

While illicit drug use is common among prison inmates, there is an agreement in research literature that substance abuse treatment initiated in correctional institutions needs to be continued in the community upon prisoners’ release (45). Prendergast et al. (45) conducted a multi-site randomised controlled trial to assess the effectiveness of a strengths-based case management programme aimed to improve treatment continuity following prisoners’ re-entry to community. The control group of parolees received a referral to community-based addiction services. Those in the intervention arm had two sessions with a case manager trained in strengths-based approach prior to their release. This was followed by three months of weekly meetings with a case manager upon release, so that parolees received psychological support as well as assistance with referrals and linkage to community services.

The initial use of substance abuse treatment upon release showed minor differences between a standard referral and intervention groups (62.1% and 65.1% respectively). However, parolees in the intervention group reported more nights in residential abuse treatment (a mean of 83.1 compared to 62.0). No differences between the intervention and control arm were reported concerning re-offending and drug use. Prendergast et al. concluded that strengths-based case management interventions may have a limited application to inmates transitioning to community.

2.3.5 Conclusion

Studies looking at interventions to improve transitions have focused on both the pathway from primary care into specialist care, and the pathway out from hospital in-patient care back into the community. The evidence indicates that early intervention services can improve transitions because they reduce the rate at which people move on to more intensive and expensive services. There is a strong evidence base supporting the need for transitions from in-patient services into the community to be carefully managed. The three key components are: 1. a continued connection for the consumers to the clinicians that cared for them in the in-patient setting; 2. consumer education and psychosocial supports; 3. peer support workers.
2.4 Discussion and conclusion

This review set out to identify factors that affect the service transition for consumers with mental illness and/or addiction. Using the Cochrane method to scope the literature we identified 45 relevant papers. These were limited to material published 2007-2017, in the English language and from developed countries. The review looked at three systems that impact on service transitions: 1. the interplay between characteristics of the individual, the service, and the design of the system; 2. the transition that occurs as a person ages and moves from paediatrics to adult and then older adult services; 3. the transition between services as the condition becomes more and less acute.

2.4.1 Summary of findings

The evidence highlights a number of important findings for improving the quality of service transitions. Firstly, there is a strong theme that relates to the connectivity between services. Areas to focus on include a consumer information system where services the consumer is transferring to have access to information from where the consumer transferred from. Connectivity and integration between services is best when there is a small number of services. In cases where the person is being discharged from hospital, the quality of the transfer is aided if the clinician still has some contact with the consumer and their care provider.

A second theme relates to the integration of psychosocial support services with the clinical services. Effective transitions require a plan to be developed in which the person has self-determination in their support needs. The system needs to be able to respond with services that meet these needs. This reduces readmissions and reduces the costs to the system.

A third theme relates to the primacy of the general practitioner within the care pathway. Having regular access to a GP reduces the time to get access to specialised care. Regular engagement with a GP post discharge reduces readmissions.

The final theme that relates to the quality of transfers is a fundamental issue for quality in health service delivery in general. Sociodemographic factors related to income, ethnicity, and where the person lives affect both access to specialised services and engagement with health services post discharge. Addressing these issues will improve the quality of the service transition system.

2.4.2 Implications for QI project on service transitions

This review was commissioned to inform the Health Quality & Safety Commission’s mental health and addiction quality improvement programme. The evidence indicates there are three areas that could be explored for improving the system of transitions. These areas come from a synthesis of the evidence. Improvements in these areas would lead to improved efficiencies in hospital resource utilisation, improved consumer satisfaction, improvement rates of recovery, and an increase in the individual’s resilience.

1. **GP engagement** Building mental health capacity and capability in primary care is a key component of a system that aims to maximise the efficiency and effectiveness of service transitions. Early identification of mental health issues
speeds up access to specialist supports, and regular engagement with general practice post discharge can reduce re-admissions.

2. **Supported discharge.** The area that has the strongest evidence for an impact on service transitions relates to systems for supported discharge. There are a number of examples of variations on this approach. A system developed for the NZ context has the potential to have a significant impact on the quality of the service transfer by reducing readmissions, and improving consumer satisfaction.

3. **Strengthening integration of psychosocial supports with clinical input.** The evidence indicates that psychosocial supports are critical in aiding the transfer from in-patient services into community based services. They also have a role in reducing the numbers transferred from primary/community care into more expensive hospital-based care. Evidence indicates that these supports need to be integrated with the clinical intervention. This means building stronger links and coordination across the relevant services and health professionals.

### 2.4.3 Conclusions

This scoping review has identified evidence across a range of contexts that indicate factors that affect service transitions in the mental health settings. This has been synthesised to identify the key themes. At the heart of the issue is a need to see the system as a continuum, rather than as a series of discrete parts. Looking at it as a continuum means that a focus needs to be placed on mechanisms to support coordination of services and a continuity of care. It also means that a focus needs to go on supporting where the majority of consumers are coming from, and/or heading to. From a pure numbers perspective this is the primary and community context. The key areas and improvement initiatives to support service transition and coordination need to sit in this domain.

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4 As stated earlier, the initial objective for this project was to explore service transitions in both the mental health and addiction settings. However, the application of the Cochrane method and the resulting search strategy did not find any useable references focused on the addiction sector.
3. REFERENCES


NOTE: References marked with an * are outside the date range set for the review (2007-2017) but have been included as they providing supporting context information to the evidence presented.
### APPENDIX 1 – SUMMARY OF EVIDENCE TABLES

**Table 1 – Summary table on evidence of factors that affect service transitions**

<table>
<thead>
<tr>
<th>Ref number</th>
<th>Author, et al</th>
<th>Country</th>
<th>Clinical condition</th>
<th>Transition type</th>
<th>Study aim</th>
<th>Factor level</th>
<th>Study type</th>
<th>Study design</th>
<th>Outcomes and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anderson</td>
<td>Canada</td>
<td>First episode psychosis</td>
<td>Transition 1 – initial pathway to specialised care</td>
<td>To compare patient pathways to early intervention care for FEP between ethnic minorities and White Canadians</td>
<td>Patient</td>
<td>Structured clinical interviews with patients admitted to early intervention services</td>
<td>171 patients of different ethnic groups were interviewed</td>
<td>Pathways of care differ depending on ethnicity. Ethnic minority groups had higher odds of entering treatment through emergency pathway and lower odds of GP referral.</td>
</tr>
<tr>
<td>2</td>
<td>Marshall</td>
<td>N/A</td>
<td>First episode psychosis</td>
<td>Transition 1 – initial pathway to specialised care</td>
<td>To establish if duration of untreated psychosis is associated with a poorer prognosis</td>
<td>Patient</td>
<td>A systematic literature review</td>
<td>A meta analysis from 26 studies covering a total of 4490 patients</td>
<td>There is a modest association between DUP and patient outcomes</td>
</tr>
<tr>
<td>3</td>
<td>Perkins</td>
<td>N/A</td>
<td>First episode psychosis</td>
<td>Transition 1 – initial pathway to specialised care</td>
<td>To establish if duration of untreated psychosis is associated with a poorer prognosis</td>
<td>Patient</td>
<td>A systematic literature review</td>
<td>A meta analysis from 43 studies covering a total of 5405 patients</td>
<td>Shorter duration of untreated psychosis is associated with a greater response to antipsychotic treatment</td>
</tr>
<tr>
<td>4</td>
<td>Singh</td>
<td>N/A</td>
<td>Severe mental illness</td>
<td>Transition 1 – initial pathway to specialised care</td>
<td>To examine the evidence concerning the relationship between ethnicity and pathways to specialised psychiatric care</td>
<td>Patient</td>
<td>A systematic literature review</td>
<td>49 studies included in the review, of which 19 were included in the meta-analysis</td>
<td>Ethnic minorities were on average 3 times more likely to enter treatment through a coercive pathway. This can be explained by discrimination, misdiagnosis, and higher incidence of psychosis among those groups.</td>
</tr>
</tbody>
</table>

**NOTE** – DUP: Duration of untreated psychosis; FEP: First episode psychosis
<table>
<thead>
<tr>
<th>Ref number</th>
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<tbody>
<tr>
<td>5</td>
<td>Katsakou</td>
<td>UK</td>
<td>Severe mental illness</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To assess involuntary patients’ satisfaction with treatment, changes over time, and factors influencing it</td>
<td>Patient</td>
<td>Observational prospective study</td>
<td>778 patients completed a validated measure of client satisfaction at admission, 1 month, 3 months, and 1 year. Patient satisfaction increased over time. Lower levels of coercion (restraint, forced medication, and seclusion) were associated with higher levels of satisfaction.</td>
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<tr>
<td>6</td>
<td>Morgan</td>
<td>UK</td>
<td>Not specified</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To understand reasons for variation in access to psychiatric care for ethnic minorities</td>
<td>Patient</td>
<td>A literature based conceptual model</td>
<td>A qualitative literature review</td>
<td>Looking at pathways to psychiatry for ethnic minorities needs to include consideration of sociological and anthropological issues.</td>
</tr>
<tr>
<td>7</td>
<td>Strauss</td>
<td>UK</td>
<td>Severe mental illness</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To examine the association between objective and subjective indices of coercive care and patient satisfaction</td>
<td>Patient</td>
<td>Observational study</td>
<td>Structured assessment surveys with 240 participants. Coercive treatment is associated with lower patient satisfaction.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Rotenberg</td>
<td>Canada</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To establish the impact of ethnicity and socioeconomic status on pathways taken to specialised mental health care</td>
<td>Patient</td>
<td>A retrospective chart review</td>
<td>762 charts were reviewed over two years (2009-2011). Ethnic minorities and low SES groups are more likely to enter FEP treatment through a coercive pathway - service transition detrimental in terms of clinical outcomes.</td>
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NOTE – FEP: First episode psychosis
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<tr>
<td>9</td>
<td>Bhui</td>
<td>UK</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To identify ethnic variations in pathways to specialist mental health care</td>
<td>Patient</td>
<td>A systematic literature review</td>
<td>38 studies included in the review, of which 12 were included in the meta-analysis</td>
<td>There is strong evidence of variation between ethnic groups for voluntary and compulsory admissions, and some evidence for variation in pathways to specialist care.</td>
</tr>
<tr>
<td>10</td>
<td>Ramos</td>
<td>Portugal</td>
<td>Not specified</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To determine the role of clinical diagnosis and sociodemographic characteristics on pathways taken to specialised mental health care</td>
<td>Patient</td>
<td>A retrospective qualitative study</td>
<td>Structured clinical interviews with 84 patients receiving inpatient psychiatric treatment</td>
<td>Common mental illness (depression, anxiety) associated with longer treatment delays. Severe mental illness associated with fewer delays. ED pathway associated with male gender, involuntary admission, less people in household, no/fewer prior mental health visits.</td>
</tr>
<tr>
<td>11</td>
<td>Tseliou</td>
<td>UK</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To explore the relationships between gender, patient pathways to early intervention services, and treatment outcomes</td>
<td>Patient</td>
<td>A retrospective cohort study</td>
<td>The authors analysed 1098 patient records: 713 patients in the sample were (65%) male</td>
<td>Men admitted to early intervention services were more likely to exhibit violent behaviour; females had higher rates of prior suicide attempts. Females were more likely to get admitted to a psychiatric unit after a year with early intervention services.</td>
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<tr>
<td>Ref number</td>
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<td>12</td>
<td>Lin</td>
<td>Canada</td>
<td>Unipolar depression</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To explore post-discharge service utilisation patterns in patients suffering from unipolar depression</td>
<td>Service</td>
<td>Retrospective cohort</td>
<td>Administrative data used to identify hospitalisations and ED admissions</td>
<td>63% of patients were followed up by a GP within 30 days post-discharge. 25% were re-hospitalised or admitted to ED.</td>
</tr>
<tr>
<td>13</td>
<td>O’Callaghan</td>
<td>Ireland</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To explore the role of help-seeking behaviours and service delays related to access to early intervention services in FEP</td>
<td>Patient</td>
<td>A retrospective cohort study: structured questionnaire</td>
<td>N=142 patients referred to an early intervention services from community services or a private psychiatric facility</td>
<td>Less than half of patients initiated help-seeking themselves (N=57); in 50% of cases help-seeking initiated by family. Half of the delays were related to help-seeking, and the other half were related to service delays.</td>
</tr>
<tr>
<td>14</td>
<td>Larsen</td>
<td>Norway</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To identify and validate patterns of premorbid functioning in first-episode psychosis.</td>
<td>Patient</td>
<td>A retrospective cohort study: structured questionnaire</td>
<td>N=355 patients referred to a community mental health service in Norway</td>
<td>Patients with a stable social support system have a shorter duration of untreated psychosis than those with a deteriorating social support system.</td>
</tr>
<tr>
<td>15</td>
<td>Ramanuj</td>
<td>UK</td>
<td>Severe mental illness</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To define patient-level factors that have an impact on service utilisation after hospital discharge</td>
<td>Patient</td>
<td>A retrospective cohort study</td>
<td>A cohort of 98 patients was followed for two years</td>
<td>An increased risk of re-referral was associated with an episode of admission to acute mental health care during the two years before service transition.</td>
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**NOTE** - FEP: First episode psychosis
<table>
<thead>
<tr>
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<tr>
<td>16</td>
<td>Norton</td>
<td>France</td>
<td>First episode psychosis</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To explore the role of general practitioners in providing care for patients discharged from psychiatric inpatient treatment</td>
<td>Service</td>
<td>A retrospective cohort study</td>
<td>121 patients were followed during 6 months after discharge for inpatient FEP treatment</td>
<td>65% of patients had a regular GP; 17.9% GPs were informed about their patient’s admission. 78.3% GPs saw their patients within 6 months from discharge. Short hospitalisation rates were related to more information provided to GPs.</td>
</tr>
<tr>
<td>17</td>
<td>Reilly</td>
<td>UK</td>
<td>Severe mental illness</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To explore the role of general practitioners in treating patients suffering from SMI</td>
<td>Service</td>
<td>A retrospective cohort study</td>
<td>followed 1,150 patient records</td>
<td>The study indicates that general practitioners play an important role in outpatient care following the first psychiatric hospitalisation and are often consulted for reasons related to the psychiatric condition. In spite of that, poor referral and information sharing practices between GPs and secondary care were found.</td>
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<tr>
<td>Ref number</td>
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<tr>
<td>18</td>
<td>Zongo</td>
<td>Canada</td>
<td>Severe mental illness</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To explore the relationship between community pharmacy loyalty and treatment retention in patients suffering from psychotic-spectrum disorders</td>
<td>Service</td>
<td>A prospective cohort study followed a total of 6,252 patients</td>
<td>Databases from Quebec health insurance board used to assess the number of pharmacies visited in a year after antipsychotics initiation</td>
<td>Patients who obtained medication from more than 4 pharmacies were 22% more likely to be non-persistent with treatment. Community pharmacy loyalty has a positive impact on treatment adherence.</td>
</tr>
<tr>
<td>19</td>
<td>Meehan</td>
<td>Australia</td>
<td>Unspecified</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To describe the characteristics of patients treated in residential rehabilitation facilities and explore barriers to discharge</td>
<td>Service</td>
<td>An audit of patient records</td>
<td>N=115 in community-based rehabilitation; N=125 in hospital-based rehabilitation</td>
<td>Patients in residential rehabilitation have high levels of disability and poor physical health. Hospital-based rehabilitation services deal with more severe cases. Some patients could be discharged if appropriate step-down options were available.</td>
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<tr>
<td>20</td>
<td>Kvig</td>
<td>Norway</td>
<td>First episode psychosis</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To explore the relationship between geographical accessibility of mental health services and treatment delays in FEP</td>
<td>Service</td>
<td>A naturalistic cross-sectional study</td>
<td>Referral pathways of 62 patients were explored</td>
<td>Treatment delays are related to geographical accessibility of mental health services in rural regions.</td>
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NOTE – FEP: First episode psychosis
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<tbody>
<tr>
<td>25</td>
<td>Singh</td>
<td>UK</td>
<td>Unspecified</td>
<td>A transition from child and youth mental health services to adult health services</td>
<td>To explore and compare transition protocols utilised by child and youth mental health services</td>
<td>System</td>
<td>A questionnaire survey</td>
<td>42 child and youth service teams participated in the survey</td>
<td>The protocols varied significantly, revealing the lack of a standardised approach to service transitions.</td>
</tr>
<tr>
<td>26</td>
<td>Taylor</td>
<td>UK</td>
<td>ADHD</td>
<td>A transition from child and youth mental health services to adult health services</td>
<td>To identify the needs of adolescent patients suffering from ADHD at the age of transition to adult mental health services</td>
<td>Patient</td>
<td>A case note review</td>
<td>139 case notes of patients younger than 14 years old were analysed</td>
<td>The study confirmed that a significant proportion (30%) of adolescent patients suffering from ADHD could benefit from a well-organised service transition to adult mental health services and require ongoing support.</td>
</tr>
<tr>
<td>27</td>
<td>Arcelus</td>
<td>UK</td>
<td>Eating disorders</td>
<td>A transition from child and youth mental health services to adult health services</td>
<td>To identify difficulties related to paediatric-to-adult service transitions in adolescents suffering from eating disorders</td>
<td>Patient</td>
<td>A retrospective cohort study</td>
<td>887 patient records were assessed</td>
<td>Adolescent suffering from eating disorders may experience specific difficulties associated with a transition to adult mental health services.</td>
</tr>
<tr>
<td>28</td>
<td>Norman</td>
<td>Not specified</td>
<td>First episode psychosis</td>
<td>Transition 1 – initial pathway to specialised care</td>
<td>To review the concept of duration of untreated psychosis (DUP)</td>
<td>Patient</td>
<td>A qualitative literature review</td>
<td>43 studies were included in the qualitative review</td>
<td>A shorter DUP may be related to reducing psychotic symptoms once treatment begins.</td>
</tr>
</tbody>
</table>

NOTE – DUP: Duration of untreated psychosis
Table 1 Continued

<table>
<thead>
<tr>
<th>Ref number</th>
<th>Author, et al</th>
<th>Country</th>
<th>Clinical condition</th>
<th>Transition type</th>
<th>Study aim</th>
<th>Factor level</th>
<th>Study type</th>
<th>Study design</th>
<th>Outcomes and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>Primavera</td>
<td>Italy</td>
<td>Severe mental illness</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To evaluate the association between DUP and long term outcomes for schizophrenia.</td>
<td>Patient</td>
<td>A retrospective analysis of clinical records</td>
<td>Outcome variables of 80 outpatients was compared to their DUP</td>
<td>A shorter DUP is a significant predictor of better outcomes for schizophrenia.</td>
</tr>
</tbody>
</table>

NOTE - DUP: Duration of untreated psychosis
Table 2 Summary of evidence for interventions aimed to improve service transitions

<table>
<thead>
<tr>
<th>Ref number</th>
<th>Author, et al.</th>
<th>Country</th>
<th>Transition type</th>
<th>Study aim</th>
<th>Study design</th>
<th>Outcomes and conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Valmaggia</td>
<td>UK</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To determine whether prodromal services shorten the DUP in patients who develop FEP. To define sociodemographic factors that differentiate prodromal service users from non-users who develop FEP</td>
<td>A retrospective cohort study. Clinical and sociodemographic data collected from 228 prodromal service users were compared to 147 patient records of patients who developed FEP without previously being enrolled in a prodromal service.</td>
<td>Patients who attended prodromal services had a significantly shorter DUP and better short-term clinical outcome. A pathway from prodromal services into specialised FEP care may be beneficial compared to alternative pathways in terms of DUP and clinical outcomes.</td>
</tr>
<tr>
<td>31</td>
<td>Ajnakina</td>
<td>UK</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To define a proportion of patients suffering from FEP who had initially presented to prodromal services in at-risk state</td>
<td>A retrospective cohort study. Analysis of data on 338 FEP patients aged 37 years and younger who presented to specialised mental health services.</td>
<td>Only 4.1% of patients who presented with FEP had been previously seen in prodromal services while in at-risk state. 77% of referrals to prodromal services were rendered by GPs. Prodromal services may benefit only a small sub-group of patients. Individuals who are not enrolled with a GP or do not seek help may be overlooked by prodromal services.</td>
</tr>
<tr>
<td>32</td>
<td>Malla</td>
<td>Canada</td>
<td>Transition 1 - initial pathway to specialised care</td>
<td>To reduce a referral delay between the first contact with health services and access to early intervention treatment for patients suffering from FEP</td>
<td>A summative evaluation study; quasi-experimental design. The intervention aimed to educate and raise awareness about FEP among primary health, educational providers, and hospital-based staff.</td>
<td>An increased referral rate to early intervention services from hospitals, particularly for patients suffering from affective psychosis and patients with low socioeconomic status.</td>
</tr>
<tr>
<td>33</td>
<td>Vigod</td>
<td>N/A</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To describe and compare interventions aimed to improve transitions from a psychiatric ward into community. To assess the impact of the interventions on readmission rates</td>
<td>A systematic literature review. 15 studies describing post-discharge interventions reviewed.</td>
<td>Post-discharge interventions and their individual components may reduce the risk of re-admissions by 13.6-37%. The interventions are likely to be cost-effective.</td>
</tr>
</tbody>
</table>

NOTE – DUP: Duration of untreated psychosis; FEP: First episode psychosis
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</thead>
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<tr>
<td>34</td>
<td>Forchuk</td>
<td>Canada</td>
<td>Transition 3 – from tertiary to community care</td>
<td>To review the evidence concerning the effectiveness of the Transitional Discharge Model (further renamed Transitional Relationship Model)</td>
<td>A narrative evidence review included a summary of two pilot implementation studies and one large-scale evaluation project.</td>
<td>The TRM-based interventions resulted in reduced hospitalisation rates, lower rates of psychiatric readmissions, and better social support for discharged patients.</td>
</tr>
<tr>
<td>35</td>
<td>Forchuk</td>
<td>Canada</td>
<td>Transition 3 – from tertiary to community care</td>
<td>To critique the mental discharge process and outline a new approach</td>
<td>A qualitative review of literature</td>
<td>Outlined an argument for a model of discharge that supports the needs of psychiatric patients.</td>
</tr>
<tr>
<td>36</td>
<td>Forchuk</td>
<td>N/A</td>
<td>Transition 3 – from tertiary to community care</td>
<td>To describe the theory, past research, and future directions in the TRM.</td>
<td>A qualitative review</td>
<td>The review supported the role of the TRM in improving outcomes for patients transitioning from inpatient care and into community care.</td>
</tr>
<tr>
<td>37</td>
<td>Forchuk</td>
<td>Canada</td>
<td>Transition 3 – from tertiary to community care</td>
<td>To describe barriers and facilitators related to the implementation of the TRM. To suggest strategies for successful implementation</td>
<td>An ethnographic qualitative study. Observation, filed notes analysis, tele-conferences and face-to-face meetings with the staff implementing the model in six tertiary care psychiatric hospitals in Ontario.</td>
<td>The study identified barriers to the implementation of the TRM model: overwhelmed by change; death by process (stunned progress); territorial behaviour. Facilitators: valuing the intervention; familiarity with the model.</td>
</tr>
<tr>
<td>38</td>
<td>Velligan</td>
<td>US</td>
<td>Transition 3 – from tertiary to community care</td>
<td>To assess the impact of engagement-focus-care (EFC) transitional intervention on the quality of life in patients discharged from psychiatric wards</td>
<td>A comparative effectiveness trial. 465 patients were randomly assigned into the intervention arm (engagement-focused-care) and a control arm (standard post-discharge outpatient care). Assessments conducted at baseline, after 3, and after 6 months after the end of post-discharge outpatient treatment.</td>
<td>Patients in the intervention arm reported increased quality of life compared to the control group. No statistically significant differences were reported with regard to hospital readmissions and ED visits.</td>
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<tr>
<td>39</td>
<td>Rose</td>
<td>US</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To document and describe the implementation of a post-discharge nurse-led transitional intervention based on a TCM. To identify key areas for further research</td>
<td>A qualitative study based on document analysis. The research team analysed field notes and assessment notes created by nurses who delivered the intervention. The intervention was delivered to 10 discharged patients.</td>
<td>During home visits, several areas of concern for patients and their families were identified, including poor physical health status, lack of physical activity, and difficulties related to medication adherence.</td>
</tr>
<tr>
<td>40</td>
<td>Brooten</td>
<td>US</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To describe the development and testing of the Advanced Practice Nurses (APN) Transitional Care programme.</td>
<td>A review of studies looking at the APN transitional care model in different clinical settings.</td>
<td>The APN intervention results in improved patient outcomes and reduced health care costs.</td>
</tr>
<tr>
<td>41</td>
<td>Nilsson</td>
<td>Denmark</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To assess the impact of a post-discharge intervention on consecutive short and long-term service utilisation</td>
<td>A retrospective cohort study with a historic comparison group. Patient records of 132 programme participants were compared with 107 records of patients who received usual outpatient care.</td>
<td>The intervention group had fewer readmissions (mean 0.14±0.459 vs 0.31±0.732; p=0.04).</td>
</tr>
<tr>
<td>42</td>
<td>Ougrin</td>
<td>UK</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To assess the effectiveness of a supported discharge service for children and adolescents leaving inpatient psychiatric care</td>
<td>A service evaluation. 20 patients aged between 12-18 years received supported discharge service (SDS). No control group.</td>
<td>The model is clinically feasible – patients and their families expressed high satisfaction with the service. The patients showed clinical improvement during their involvement in the programme. However, the absence of the control group does not allow assessment of programme efficiency.</td>
</tr>
<tr>
<td>43</td>
<td>Boege</td>
<td>Germany</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To assess the cost-effectiveness of an early supported discharge programme against inpatient treatment</td>
<td>A cost-effectiveness study conducted alongside a randomised controlled trial by Boege et al.*</td>
<td>The early discharge intervention proved to be cost-effective compared to traditional inpatient treatment.</td>
</tr>
<tr>
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<tr>
<td>44</td>
<td>Kasprow</td>
<td>US</td>
<td>Transition 3 - from tertiary to community care</td>
<td>To evaluate the outcomes of a case management-based model for homeless veterans leaving Veterans Administration inpatient mental health care facilities</td>
<td>A prospective cohort study with a historic comparison group. Overall, the study included 484 participants.</td>
<td>Intervention recipients spent more days housed and less days institutionalised. The intervention resulted in clinical improvement, reduced alcohol and drug use, and increased number of days patients spent employed.</td>
</tr>
<tr>
<td>45</td>
<td>Prendergast</td>
<td>US</td>
<td>Transition from penitentiary institution to community</td>
<td>To assess the impact of a strengths-based case management intervention targeted at substance-abusing inmates leaving prisons</td>
<td>A multi-site clinical trial. Participants were randomly allocated into a transitional case management group (N=412) and a standard referral group (N=400).</td>
<td>Although intervention recipients received more residential abuse treatment (mean 83.1 vs 62.0), no difference in substance abuse was documented.</td>
</tr>
</tbody>
</table>