Programs for Care System Transitions in Mental Health

A Systemic Review

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About This Report

Over the past two decades, the U.S. Department of Defense (DoD) has invested unparalleled resources into developing effective treatments for military-related psychological health conditions. Systematic reviews, which are a key component in the knowledge translation process, function to translate the available research into evidence-based health care guidelines that promote optimal clinical care. Although a few government agencies, including the Department of Veterans Affairs (VA) and the Agency for Healthcare Research and Quality (AHRQ), have established evidence synthesis centers, there is no similar center within DoD that focuses exclusively on psychological health issues. Thus, the Southern California Evidence-Based Practice Center, which is affiliated with the RAND Corporation, has been awarded a multiyear contract to synthesize research on psychological health interventions important to military populations. This document is a systematic review. The review will be of interest to health policymakers and practitioners, as well as to patients experiencing transitions in mental health care. None of the authors has any conflict of interest to declare.

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Summary

Background

Care transitions are a common feature of health care, but most occur within a single health care system. However, patients can also face transitions between systems when they experience life events such as a new job, a change in insurance providers, or a move between locations. These transitions can be especially complicated when patients leave an integrated health care system such as the Military Health System (MHS) and are required to manage their own care until they enter a new system. Navigating these transitions can be especially important for patients who need regular care, such as those with mental health conditions.

The objective of this systematic review and meta-analysis is to summarize the evidence on interventions that are intended to improve health care system transitions for patients with mental health conditions.

This review examined the following key question (KQ) and subquestions:

- KQ1. What are the effects of mental health care transition programs?
  - KQ1a. What are the effects of mental health care transition programs for transitions from military to veteran health care systems?
  - KQ1b. Do the effects vary by population?
  - KQ1c. Do the effects vary by intervention type?
  - KQ1d. Do the effects vary by country?

Methods

We searched research databases (PubMed, PsycINFO, and the Web of Science), databases and registries of systematic reviews (Cochrane Database of Systematic Reviews [CDSR], Campbell Collaboration, International Prospective Register of Systematic Reviews [PROSPERO], Open Science Framework), and the Defense Technical Information Center (DTIC) database from inception to April 2020 for English-language evaluations of interventions to improve health care transitions for patients with mental health conditions. Existing systematic reviews were reference-mined for additional studies. The review was registered in PROSPERO (CRD42020187360).

Citations from these searches were independently screened by two reviewers using predetermined eligibility criteria. Both reviewers independently abstracted categorical data from studies that met inclusion eligibility criteria. One reviewer abstracted data and assessed risk of bias using the Cochrane Risk of Bias 2 (RoB 2) tool for included studies. These responses were independently checked by the topic lead. Outcomes included measures of health, health care, patient experience, and unintended consequences.
Results across studies were summarized using Hartung-Knapp corrected random effect meta-analyses when data allowed. All results were described in a narrative review. Meta-regressions were performed by preplanned subgroup analyses, which examined differential intervention effects by population, intervention subtype, and study country. Quality of evidence for each outcome in meta-analyses was assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach.

Results

We identified interventions targeting health care transitions for active duty service members entering civilian life, children entering adulthood, and recently released prisoners. Quality of evidence was low or very low for most main and subgroup analyses.

Key Question 1. What Are the Effects of Mental Health Care Transition Programs?

Across studies, care transition intervention increased outpatient mental health service use (relative risk [RR] 1.27, confidence interval [CI] 1.02, 1.57; six studies). In single studies that could not be combined with others, we also found that interventions increased outpatient mental health service use (standardized mean difference [SMD] 0.80; 95 percent CI 0.72, 0.89; one study) and increased hospitalization/inpatient treatment (SMD 0.14; CI 0.06, 0.22; one study).

Key Question 1a. What Are the Effects of Mental Health Care Transition Programs for Transitions from Military to Veteran Health Care Systems?

In the only study examining service members entering civilian life, a care transition intervention reduced mental health symptoms (RR 0.73; CI 0.62, 0.86; one study).

Key Question 1b. Do the Effects Vary by Population?

Meta-regressions across studies indicated that interventions for children entering adulthood increased mental health service use more than interventions for recently released prisoners. Among children entering adulthood, interventions increased outpatient mental health service use (SMD 0.80; CI 0.72, 0.89; one study) and hospitalization/inpatient treatment (SMD 0.14; CI 0.06, 0.22; one study). Among recently released prisoners, an intervention reduced mental health symptoms (RR 0.24; CI 0.16, 0.36; one study). Interventions had no consistent effect on any other outcome.

Key Question 1c. Do the Effects Vary by Intervention Type?

We categorized interventions as health coaching, service navigation, care coordination, or any combination of the three; all analyses were based on a single study. Service navigation was associated with reduced mental health symptoms (RR 0.73; CI 0.62, 0.86; one study) and increased insurance coverage (RR 4.64; CI 2.17, 9.91; one study). A study of health coaching and service navigation showed that the combined intervention increased primary care use
A care coordination and service navigation intervention was associated with increased patient self-efficacy/self-activation (SMD 0.42; CI 0.14, 0.69; one study). Combined health coaching and care coordination interventions were associated with reduced mental health symptoms (RR 0.24; CI 0.16, 0.36; one study) and increased primary care use (RR 2.22; CI 1.37, 3.58; one study). An intervention composed of all three types was associated with increased outpatient mental health service use (SMD 0.80; CI 0.72, 0.89; one study) and hospitalization/inpatient treatment (SMD 0.14; CI 0.06, 0.22; one study). No other combinations were associated with changes in outcomes, and meta-regressions indicated that intervention type was not related to intervention effectiveness on outpatient mental health or primary care use. Data were not sufficient for additional meta-regressions with other outcomes.

Key Question 1d. Do the Effects Vary by Country?

Interventions were evaluated in the United States (n = 10), the United Kingdom (n = 3), Canada (n = 2), Australia (n = 1), and New Zealand (n = 1). Interventions in the United States increased outpatient mental health use (SMD 0.80; CI 0.72, 0.89; one study), hospitalization/inpatient treatment (SMD 0.14; CI 0.06, 0.22; one study), and patient self-efficacy/self-activation (SMD 0.42; CI 0.14, 0.69; one study). Studies in the United Kingdom indicated that care transition interventions increased primary care use (RR 2.24; CI 1.80, 2.78; two studies). An intervention in Australia increased primary care use (RR 1.29; CI 1.11, 1.50; one study). Other interventions studied in the United States, the United Kingdom, and Australia and all interventions studied in the Canada and New Zealand were not associated with consistent effects. Meta-regressions indicated no difference in intervention effectiveness between countries for outpatient mental health and primary care use. Additional meta-regressions for other outcomes could not be run due to lack of data.

Conclusion

We found no consistent effects of care transition interventions across studies and outcomes but interventions may increase outpatient mental health service use. Indirect comparisons across populations were limited by the small number of studies in included patient subgroups. Additional research on interventions for care transitions among patients with mental health conditions is needed.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADHD</td>
<td>attention hyperactive deficit disorder</td>
</tr>
<tr>
<td>AHRQ</td>
<td>Agency for Healthcare Research and Quality</td>
</tr>
<tr>
<td>CAMHS</td>
<td>Community Child and Adolescent Mental Health Services</td>
</tr>
<tr>
<td>CDSR</td>
<td>Cochrane Database of Systematic Reviews</td>
</tr>
<tr>
<td>CI</td>
<td>confidence interval</td>
</tr>
<tr>
<td>DoD</td>
<td>Department of Defense</td>
</tr>
<tr>
<td>DTIC</td>
<td>Defense Technical Information Center</td>
</tr>
<tr>
<td>GRADE</td>
<td>grading of recommendations assessment, development, and evaluation</td>
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<tr>
<td>KQ</td>
<td>key question</td>
</tr>
<tr>
<td>MHS</td>
<td>Military Health System</td>
</tr>
<tr>
<td>N/A</td>
<td>not applicable</td>
</tr>
<tr>
<td>NR</td>
<td>not reported</td>
</tr>
<tr>
<td>PACIC</td>
<td>Patient Assessment of Chronic Illness Care</td>
</tr>
<tr>
<td>PROSPERO</td>
<td>International Prospective Register of Systematic Reviews</td>
</tr>
<tr>
<td>QOL</td>
<td>quality of life</td>
</tr>
<tr>
<td>RCT</td>
<td>randomized controlled trial</td>
</tr>
<tr>
<td>RR</td>
<td>relative risk</td>
</tr>
<tr>
<td>SD</td>
<td>standard deviation</td>
</tr>
<tr>
<td>SMD</td>
<td>standardized mean difference</td>
</tr>
<tr>
<td>VA</td>
<td>Department of Veterans Affairs</td>
</tr>
<tr>
<td>VHA</td>
<td>Veterans Health Administration</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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1. Introduction

Care transitions are a key component of care management. Care management (Agency for Healthcare Research and Quality, 2018; Croghan and Brown, 2010) involves managing and coordinating the mental health and other medical care of complex patients. Care models that employ care management for mental health conditions have the potential to lead to better patient outcomes without increasing costs (Woltmann et al., 2012). A recent model of care management (SELFIE: Sustainable intEgrated chronic care modeLs for multi-morbidity: delivery, Financing, and performancE) details six components: leadership and governance, technologies and medical products, information and research, workforce, service delivery, and financing (Leijten et al., 2018). Managing the service delivery and financing of mental health care can ensure that patients receive and pay for the care they need. Usually care management is static—that is, it goes through a single provider or health care system—but transitions between providers or systems are often necessary.

Transitions within health care systems are common, in particular the transition from primary to specialty medical or mental health care. Care transitions between health care systems, such as the move from the military health system to the Veterans Affairs (VA) system, pose additional challenges. The U.S. military health care system currently uses inTransition, a program that seeks to facilitate the uninterrupted delivery of mental health services during care transitions, while considering service members’ insurance coverage, care eligibility, and financial situations. The program aids service members with transitions both within and between the military, VA, and civilian health care systems.

Military-Health-System-to-Veterans Health Administration (MHS to VHA) transitions are a key area of interest, as many veterans, especially those who are service-connected, use VHA care for mental health care. About two-thirds of recently separated veterans use VHA care within 90 days of separation, although not necessarily at VHA (Aronson et al., 2019; Perkins et al., 2019). A literature scan revealed that military-VHA health care faces barriers to interoperability in many areas, including diagnosis (Copeland et al., 2011), service utilization (Harris et al., 2014), disability evaluation (Bertoni, 2012), and purchased care (Farmer et al., 2018). However, only 27 percent of all veterans have ever been enrolled in VHA (only 11 percent who never enrolled were ineligible for benefits), and a majority of all veterans currently have employer- or union-sponsored health insurance (Westat, 2010). Nearly 80 percent of VHA enrollees have a service-connected disability, even though all recent combat veterans receive elevated VA priority (U.S. Department of Veterans Affairs, 2019), so the average veteran receiving mental health care may not be representative of veterans who transition from military to VHA care (Huang et al., 2018).
Nearly 6 percent of veterans remain uninsured altogether after they separate from service (Haley, Kenney, and Gates, 2017). Veteran enrollment in VHA care may not be attractive due to limitations on access to and cost of care. Veterans enrolled in VHA care are assigned to a “priority group,” with higher priority given to veterans with service-connected disabilities, combat-related awards, service during specific periods, and low income (U.S. Department of Veterans Affairs, 2020). Veterans in low priority groups are at a lower priority to receive care and must contribute copays. Research has shown that uninsured veterans are less likely to have a service-connected injury or functional limitation, earn a low or middle income, and live in a state that did not expand Medicaid eligibility after the passage of the Patient Protection and Affordable Care Act (Tsai and Rosenheck, 2014; Haley, Kenney, and Gates, 2017). The Affordable Care Act (H.R. 3590, 2010) expanded Medicaid coverage to individuals who earn less than 138 percent of the Federal Poverty Line, but this expansion was ruled optional for states by the Supreme Court (National Federation of Independent Business v. Sebelius, 2012). For individuals earning between 100 and 400 percent of the Federal Poverty Line, subsidies for the purchase were offered, and until 2017, a tax penalty was enacted on individuals without coverage (Public Law 115-97, 2017). This “individual mandate” resulted in an increase in private health insurance among veterans from 2008 to 2017 (Oh and Berry, 2019), and thus it is likely that the repeal of the mandate will lead to an increase in uninsured veterans. Veterans who do not qualify for high VHA priority groups or low-cost private insurance may remain uninsured due to cost and could need access to transition services to understand their options for insurance and care.

Although defined programs that address the transition out of the military health system exist, our initial scoping search identified very few evaluations of programs in military populations. Hence, models in other populations that may inform an evidence-based approach to facilitating care transitions should be explored. Discussions with key informants confirmed that little empirical research is available. However, all key informants emphasized the importance of the topic and confirmed that evidence-based information on the best approaches to care transitions between systems is needed. Several key informants noted that Department of Defense (DoD) and VA data are not linked and highlighted this as one of the barriers for the research area. However, this barrier may be remedied by the forthcoming Joint Health Information Exchange, which links MHS and VA health care records (Military Health System Communications Office, 2020). Some key informants observed that the question of responsibility hinders effective approaches between systems (e.g., DoD is no longer responsible for patients who left the military health system, and the VA is only responsible for patients once enrolled).

Additional populations of interest are emerging adults leaving foster care and recently released prisoners. Fourteen percent of children in foster care report symptoms of depression, and an additional 14 percent report symptoms of anxiety (Turney and Wildeman, 2016). Foster care youth who turn 18 face health care challenges when leaving the foster care system. They no longer qualify for Medicaid as a child and have no parents or guardians to provide them with insurance until the age of 26 (Employee Benefits Security Administration, undated). Therefore,
they must obtain health insurance through adult Medicaid or privately via education, employment, or state-based insurance exchanges. A recent review (Chu et al., 2015) of interventions to facilitate the transition of chronically ill adolescents from pediatric to adult care reported mixed (Johnston et al., 2006; Van Walleghem, Macdonald, and Dean, 2008; Steinbeck et al., 2015) and positive (Cadario et al., 2009; Hankins et al., 2012) effects of these interventions on health care outcomes. The effective interventions were conducted in Italy (Cadario et al., 2009) and the United States (Hankins et al., 2012), versus interventions in Australia, Canada, and the United Kingdom (Chu et al., 2015). Institutional and health system contexts may affect outcomes. Furthermore, a recent review of transition services for adolescents with mental health needs (Paul et al., 2015) found three interventions in the United States that reported positive (Haber et al., 2008; Styron et al., 2006) or mixed (Gilmer et al., 2012b) effects.

Recently released prisoners also face challenges regarding continuity of care. Nearly a quarter of prisoners in U.S. state prisons reported symptoms of major depression, and about 10 percent reported symptoms of a psychotic disorder (James and Glaze, 2006). Stakeholders who note that a lack of mental health care for recently released prisoners can lead to recidivism highlight the need for care transition services (Pew Center on the States, 2011). A large study of a care transition intervention among ex-prisoners in Australia showed positive effects for contact of general practitioners (Kinner et al., 2016) and health care service utilization (Young et al., 2015). A study of ex-prisoners in California reported that a care management intervention resulted in lower emergency department use, but had no effect on the use of primary care (Wang et al., 2012).

Finally, known interventions such as health coaching, service navigation, and care coordination may be useful in other care transitions, such as from primary to specialty care or vice versa. A recent Cochrane review by Jia and coauthors (2014) reported that two controlled trials evaluating service navigation and application availability interventions were associated with higher health insurance enrollment. An additional ten longitudinal studies with comparators were excluded from this randomized controlled trial (RCT) review; they could, however, provide additional evidence for the topic. More generally, there are several systematic reviews on health coaching for chronic conditions that suggest coaching improves health outcomes (Kivela, Kyngas, and Kaariainen, 2014; Hill, Richardson, and Skouteris, 2015), but no reviews are specific to mental health. A qualitative review of reviews funded by the Agency for Healthcare Research and Quality (AHRQ) on care coordination (McDonald et al., 2007) has noted generally positive effects of care coordination on health and health care outcomes, but analyses were not specific to mental health.

In the United States, transitioning between health care systems can be challenging for many patients with mental health conditions. The health care landscape is very complex (Institute of Medicine Committee on Quality of Health Care in America, 2001), and changes in life events (e.g., changing a job) can leave patients with unmet care needs (Huang, Birkenmaier, and Kim, 2014). Mental health care transition interventions are intended to help patients continue to
receive care, navigate changes in coverage or care, and/or coordinate between multiple providers as care transitions. We conducted this systematic review to understand the effects of mental health care transition programs and how these effects vary by population, intervention type, and country. This review analyzes the literature on mental health care transitions through the following key question (KQ) and subquestions:

- **KQ1.** What are the effects of mental health care transition programs?
  - **KQ1a.** What are the effects of mental health care transition programs for transitions from military to veteran health care systems?
  - **KQ1b.** Do the effects vary by population?
  - **KQ1c.** Do the effects vary by intervention type?
  - **KQ1d.** Do the effects vary by country?
2. Methods

This systematic review is registered in the International Prospective Register of Systematic Reviews (PROSPERO, registration number CRD42020187360). Key informants helped to determine the best approach to the review questions.

Key Informants

To prepare the systematic review protocol, we sought the advice of several experts, including

- Carrie Farmer, expert in military and veteran health and health care
- Laurel Copeland, expert on military-to-VA care transitions
- Priscillia Hunt, expert on prisoner reentry
- Rajeev Ramchand, expert on veterans.

Sources

We searched the research databases PubMed (biomedical literature), PsycINFO (psychological literature), and the Web of Science (general scientific database) to identify empirical studies reporting an evaluation of a strategy for between-system transitions. Databases were searched from inception in March 2021. We searched the Cochrane Database of Systematic Reviews (CDSR), the review collection of the Campbell Collaboration, the registry PROSPERO for existing systematic reviews, and the Open Science Framework to identify potentially existing scoping reviews and evidence maps on the topic. We also searched the Defense Technical Information Center (DTIC) database to find defense-related white papers and reports on care transitions. We reference-mined bibliographies of existing reviews and included studies to find additional references to assess for possible inclusion. Finally, we consulted with topic experts to ensure that all relevant studies have been identified.

Search Strategy

The search strategy was developed by an experienced Evidence-based Practice Center librarian and informed by content experts and existing systematic reviews. The strategy is listed in Appendix A. In short, this strategy aims to identify studies that evaluate interventions for patients receiving mental health care and undergoing care transitions.
Eligibility Criteria

Inclusion and exclusion criteria were applied to retrieved records and publications using the following Participants, Interventions, Comparators, Outcomes, Timing, Setting, and Study design (PICOTSS) Framework:

- Participants: studies of adults with a clinical diagnosis of a mental illness according to the Diagnostic and Statistical Manual of Mental Disorders or the International Classification of Diseases diagnostic criteria, who were undergoing a care transition between health care systems, including from MHS to VHA, MHS to insurance after a lack of insurance, foster care services to adult care services, or prison health care systems to community health care systems
- Interventions: studies evaluating any intervention relating to mental health care transitions, including health insurance navigation, health coaching, and care coordination, but not studies evaluating transitions with the same health care system
- Comparators: studies were not limited by comparator and could include concurrent or historic comparators
- Outcomes: studies that reported on health care outcomes (e.g., use of the intervention service offer, changes in insurance rates, frequency of provider visits), patient experience outcomes (e.g., patient satisfaction with transition services), health outcomes (e.g., mental health outcomes), or intervention uptake measures
- Timing: studies were not limited by duration or follow-up period
- Setting: studies were not limited by setting and included U.S. as well as international studies and primary as well as specialty care.
- Study design: empirical studies that reported on the effect of an intervention aiming to facilitate care transitions were not limited by study design, but studies describing insurance coverage or other system outcomes without reference to a specific intervention were excluded.

Only studies published in English were included.

Inclusion Screening

Titles and abstracts of retrieved citations were screened in duplicate by two independent reviewers. Citations marked as potentially eligible by at least one reviewer were obtained as a full-text article.

Full-text publications were screened for eligibility against the specified criteria by two independent reviewers. Disagreements were resolved through discussion. All reasons for exclusion were recorded in an electronic database.

Data Extraction

Data were extracted using a standardized form in an online database designed for systematic reviews. The extraction form was pilot-tested by two reviewers and pilot test results were
examined by a third reviewer to ensure consistency in interpretation and data extraction. Categorical data were extracted by two independent reviewers, while free-text data were extracted by one reviewer and independently checked by the topic lead. All disagreements were resolved through discussion.

The data extracted from individual studies included the following:

- **Study identification**: lead author name, study year, multiple publications, study country, funding source
- **Study design**: study type, inclusion and exclusion criteria, sample size, reported power calculation, items relevant for risk of bias assessment
- **Participants**: age, gender, group (military, previously uninsured veterans, previous foster children, recently released prisoners, other), mental illness diagnosis where reported
- **Interventions**: category (health coaching, service navigation, and so on), intervention description (including content and duration), cointerventions
- **Comparator**: type and description of comparator
- **Outcomes and results**: health outcomes, health care measures; patient experience; unintended consequences and adverse events; intervention uptake measures; time-point of latest outcome assessment relative to the start and the end of the intervention

Publications reporting on the same study (defined by the study population) were consolidated and not counted or analyzed multiple times. Methodological details and findings for each included study are reported in Table B.1.

### Risk of Bias Assessment

Included studies were assessed for key sources of bias that may have influenced the reported results. While one reviewer assessed studies for risk of bias, the lead author checked the assessment for accuracy and consistency.

Studies contributing to key questions were assessed for the following sources of bias:

- selection bias and risk of bias arising from the randomization process
- performance bias and bias due to deviations from intended interventions
- attrition bias and bias due to missing outcome data
- detection bias and bias in measurement of the outcome
- reporting bias and bias in selection of the reported results
- other sources of bias.

The selection of these risk of bias domains was informed by established risk of bias assessment approaches and the latest version of the Cochrane Risk of Bias 2 (RoB2) tool (Sterne et al., 2019). For selection bias, we assessed the randomization sequence and the allocation concealment of the interventions in RCTs as well as baseline differences in participants and potential confounders in all studies. Performance bias evaluated whether patient- or researcher-knowledge of the intervention allocation or other circumstances such as the trial context may have affected the
outcome and whether any deviations from intended interventions were balanced between groups. Attrition bias considered the number of dropouts, any imbalances across study arms, and whether missing values may have affected the reported outcomes. Detection bias assessed whether outcome assessors were aware of the intervention allocation, whether this knowledge could have influenced the outcome measurement, and whether the outcome assessment could differ between arms. Reporting bias assessment included an evaluation of whether a prespecified analysis plan exists (e.g., a published protocol), whether the numerical results were likely to have been selected on the basis of the results, and whether key outcomes were not reported (e.g., an obvious effectiveness indicator was missing) or inadequately reported (e.g., anecdotal adverse event reporting). In addition, we assessed other potential sources of bias such as early termination of trials, inadequate reporting of intervention details, and lack of intention-to-treat analyses.

Data Synthesis

Study results are presented in a narrative synthesis accompanied by detailed evidence tables and comprehensive figures. Outcomes are health outcomes, health care outcomes, patient experiences, and unintended consequences.

We aggregated data across studies in pooled statistical analyses calculating measure-independent effect sizes where possible. Results were estimated in random effect meta-analyses using Hartung-Knapp corrections. Point estimates, using standardized mean differences (SMD) and relative risks (RRs), were documented together with the 95 percent confidence interval (CI) for individual studies and across studies where possible. Where effect sizes for individual studies could not be calculated, we converted absolute numbers to rates to facilitate comparisons across studies.

Results for transition approaches from the military to the VHA system were a prespecified subgroup analysis. In addition, we explored the effects of population subgroups (e.g., foster children in transition), intervention (e.g., service navigation, health coaching), and country (e.g., U.S. health care system).

Quality of Evidence Assessment

We documented the findings across studies as well as the quality of the evidence. The quality of evidence assessment used Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach. The assessment took study limitations, inconsistency, indirectness, imprecision, reporting bias, magnitude of effect, dose-response relationship, and plausible confounding that may decrease the observed effect into account to downgrade or upgrade quality.

Each evidence statement was assessed according to these criteria to determine the overall strength of evidence. Consistent with GRADE methodology, effect estimates based exclusively on observational evidence were downgraded from the starting point low quality of evidence;
estimates including RCTs started at high quality of evidence before downgrading or upgrading evidence. We differentiated the following strength of evidence levels:

- high
- moderate
- low
- very low.

The categories communicate the confidence in the summary estimates for the findings across studies. **High** indicates that the review authors are very confident that the effect estimate lies close to the true effect for a given outcome. **Moderate** indicates that the review authors are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different. **Low** indicates that the review authors’ confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect. **Very low** indicates that the review authors have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect. The evidence statements were drafted by the topic lead and discussed with another team member to ensure quality control and consistency of interpretation.
3. Results

The purpose of this systematic review was to synthesize the available evidence on care transitions between the military and civilian health care systems and similar transitions between other institutional health care systems. The initial database search yielded 6,811 results to be screened at the title and abstract level. Of these, 586 sources were selected for full-text review, plus an additional 147 sources selected from reference-mining, resulting in a total of 733 to be screened at full-text level. Eleven citations could not be retrieved as full text.

The results of the literature searches and screening decisions are shown in a Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram (Figure 3.1).

Figure 3.1. Literature Flow Diagram

- Citations identified through database searching ($n = 6,811$)
- Additional citations identified through other sources ($n = 147$)
- Citations screened ($n = 6,958$)
- Excluded citations ($n = 6,225$)
- Full-text publications assessed for eligibility ($n = 733$)
- Included studies ($n = 17$ studies reported in 21 publications)

Background ($n = 99$)

Full-text articles excluded, with reasons ($n = 613$)
- Exclude-Participants: $n = 71$
- Exclude-Intervention: $n = 196$
- Exclude-Comparator: $n = 3$
- Exclude-Outcome: $n = 85$
- Exclude-Study design: $n = 238$
- Exclude-Duplicate: $n = 12$
- Exclude-Language: $n = 8$
Full-text screening yielded 17 studies in 21 publications that met inclusion criteria (Binswanger et al., 2015; Cheng et al., 2018; Gilmer et al., 2012a; Gorter et al., 2015; Harris et al., 2020; Hartwell, Fisher, and Deng, 2009; Hourani et al., 2012; Jarrett et al., 2012; Kidd et al., 2019; Kinner et al., 2016; Kinner et al., 2013; Kinner et al., 2014; Lemke et al., 2018; MacInnes et al., 2021; McKenna et al., 2015; Moosa and Sandhu, 2015; Sheidow, McCart, and Davis, 2016; Tsai and Goggin, 2017; Wang et al., 2012; Wenzlow et al., 2011; Young et al., 2015).

Included Studies

The majority of the research studies occurred in the United States (Binswanger et al., 2015; Gilmer et al., 2012a; Hartwell, Fisher, and Deng, 2009; Harris et al., 2020; Hourani et al., 2012; Lemke et al., 2018; Sheidow, McCart, and Davis, 2016; Tsai and Goggin, 2017; Wang et al., 2012; Wenzlow et al., 2011); three took place in the United Kingdom (Jarrett et al., 2012; MacInnes et al., 2021; Moosa and Sandhu, 2015), two in Canada (Gorter et al., 2015; Kidd et al., 2019), one in Australia (Kinner et al., 2016), and one in New Zealand (McKenna et al., 2015).

Five studies were RCTs (Binswanger et al., 2015; Jarrett et al., 2012; Kinner et al., 2016; Lemke et al., 2018; Wang et al., 2012), six studies examined observational prospective cohorts (Gorter et al., 2015; Hourani et al., 2012; Kidd et al., 2019; MacInnes et al., 2021; Moosa and Sandhu, 2015; Sheidow, McCart, and Davis, 2016), and four studies were observational retrospective cohort comparisons (Hartwell, Fisher, and Deng, 2009, a study of transition episodes rather than individuals; Gilmer et al., 2012a; McKenna et al., 2015; Wenzlow et al., 2011). Harris et al. (2020) and Tsai and Goggin (2017) offered cross-sectional analyses of intervention uptake and patient experiences.

Ten of the included studies related to recently released prisoners transitioning into community health care (Binswanger et al., 2015; Sheidow, McCart, and Davis, 2016; Kinner et al., 2016; Hartwell, Fisher, and Deng, 2009; Jarrett et al., 2012; MacInnes et al., 2021; McKenna et al., 2015; Tsai and Goggin, 2017; Wang et al., 2012; Wenzlow et al., 2011). One study involved a veteran population (Tsai and Goggin, 2017). Seven interventions were for children and/or adolescents transitioning to adult services (Gilmer et al., 2012a; Gorter et al., 2015; Harris et al., 2020; Kidd et al., 2019; Lemke et al., 2018; Moosa and Sandhu, 2015; Sheidow, McCart, and Davis, 2016). Two of the nine prison-related studies crossed into other populations: Tsai and Goggin (2017) assessed a veterans-only prison unit; Sheidow, McCart, and Davis (2016) looked at a program for mentally ill adolescents with justice involvement. Only Hourani et al. (2012) considered the military to veteran health care transition.

The interventions included in the synthesis were categorized into three intervention types: health coaching, service navigation, and care coordination. Health coaching was defined as some sort of mentorship or guidance that encouraged patients’ self-efficacy in managing their own care and/or health. Service navigation involved helping patient access care and/or benefits (e.g., Medicaid enrollment). Care coordination dealt specifically with organizing patient care between providers from each system. Fifteen of the included interventions had some aspect related to
service navigation, except MacInnes et al. (2021) and Sheidow, McCart, and Davis (2016), which only examined interventions that involved health coaching and care coordination. Four studied service navigation alone (Hartwell, Fisher, and Deng, 2009; Hourani et al., 2012; Wang et al., 2012; Wenzlow et al., 2011). Four interventions involved service navigation with health coaching (Gorter et al., 2015; Kidd et al., 2019; Kinner et al., 2016; Tsai and Goggin, 2017), and five included care coordination efforts along with service navigation (Binswanger et al., 2015; Harris et al., 2020; Jarrett et al., 2012; Lemke et al., 2018; Moosa and Sandhu, 2015). Two studies had all three components (Gilmer et al., 2012a; McKenna et al., 2015).

Comparators included treatment as usual (Hartwell, Fisher, and Deng, 2009; Lemke et al., 2018; Gilmer et al., 2012a; Jarrett et al., 2012; Kinner et al., 2016; MacInnes et al., 2021; McKenna et al., 2015; Wenzlow et al., 2011), historical controls (Gorter et al., 2015; Hourani et al., 2012; Kidd et al., 2019; Moosa and Sandhu, 2015; Sheidow, McCart, and Davis, 2016), facilitated enrollment into an indigent care program with no postenrollment services (Binswanger et al., 2015), an expedited appointment with primary care physician with no transition support (Wang et al., 2012), and no comparison group (Harris et al., 2020; Tsai and Goggin, 2017).

Risk of Bias

Overall, ten of the fifteen studies were judged to have a high risk of bias (Figure 3.2).

![Figure 3.2. Overall Risk of Bias for Included Studies](image)

Only one study was rated as low risk of bias. This overall high risk of bias in the included studies was due mostly to infeasibility and/or no efforts for blinding in treatment allocation,
resulting in high likelihood of performance bias. Even in RCTs, it was difficult to maintain blinding in participants simply due to the amount of contact between researchers and patients. All but one study (Kinner et al., 2016) lacked a published protocol, which made it difficult to ascertain the risk of reporting bias in most cases. One study (Gilmer et al., 2012a) was judged to have a high risk of reporting bias, as it described an outcome in its methods section that was never reported in its results section. This overall assessment of low-quality data indicates a need for more robust studies for this type of intervention in these vulnerable populations.

Key Question 1. What Are the Effects of Mental Health Care Transition Programs?

To answer this key question, we grouped together studies evaluating any intervention on any population (military service members; veterans; recently released prisoners; children/adolescents leaving foster care). Below, we detail individual and pooled analyses for the effect of mental health care transition programs on health, health care, and patient experience outcomes.

Figure 3.3 reports on mental health symptoms across two identified studies that reported outcomes that could be analyzed using RR (both studies reported categorical data; no difference between intervention and control group would be indicated by an RR of 1).

Figure 3.3. Mental Health Symptoms (Relative Risk)
Across studies that reported categorical mental health outcomes, care transition interventions were not systematically associated with a statistically significant likelihood of a change in symptoms across studies, and given the very large CI, no precise estimate could be determined (RR 0.43; CI 0, 473; two studies: Hourani et al., 2012; Sheidow, McCart, and Davis, 2016). However, both individual interventions reported a decrease in mental health symptoms. The two effect estimates varied, and heterogeneity was considerable in this analysis ($I^2 = 96\%$). In one of these studies, Hourani and colleagues (2012) followed marines separating from service who were required to attend a Transition Assistance Program. Part of this program helped these separating service members in navigating their veterans’ benefits. In the other study, Sheidow, McCart, and Davis (2016) examined young adults who had both a serious mental illness and a recent arrest or release from incarceration. These young adults received the Multisystemic Therapy for Emerging Adults intervention. Components of this intervention taught participants how to manage health insurance, treatment attendance, and engagement with providers. The intervention also provided health coaching from peers without serious mental illness.

Figure 3.4 reports on mental health symptoms that could be analyzed using SMD (both studies reported continuous outcomes; no difference between intervention and control group would be indicated by an SMD of 0.0).
For studies that reported continuous mental health outcomes, care transition interventions were not associated with a statistically significant change in symptoms in individual studies or across studies (SMD –0.16, 95% CI –3.41, 3.10; two studies: Binswanger et al., 2015; Kidd et al., 2019). Kidd and colleagues (2019) evaluated a multicomponent intervention that gave formerly homeless youth access to a case worker to help in the navigation of the health system (housing, education, employment and justice systems), as well as access to peer support and professional mental health support. These participants were evaluated against historical controls. Binswanger and colleagues (2015) evaluated a three-month intervention that provided both service navigation to former prisoners enrolling in a local indigent care program and care coordination with primary care providers in a community health system and compared these to referral to an enrollment specialist for the indigent care program alone. The analysis detected heterogeneity despite the small number of studies ($I^2 = 11\%$).

Figure 3.5 reports on physical health symptoms across two identified studies that reported on the outcome.

**Figure 3.5. Physical Health Symptoms**

![Physical Health Symptoms Diagram]
Interventions were not associated with a significant effect on physical health symptoms in individual studies or combined across studies (SMD –0.26; CI –4.61, 4.08; two studies: Binswanger et al., 2015; Kidd et al., 2019). However, treatment estimates varied across studies, and the analysis detected moderate heterogeneity ($I^2 = 44\%$).

Figure 3.6 reports on mental health service use across five identified studies that reported on the outcome.

*Figure 3.6. Mental Health Service Use*

Care transition interventions increased mental health service use across six studies (RR 1.27; CI 1.02, 1.57; 6 studies: Hartwell, Fisher, and Deng, 2009; Jarrett et al., 2012; Kinner et al., 2016; MacInnes et al., 2021; McKenna et al., 2015; Wenzlow et al., 2011). The analysis detected low heterogeneity ($I^2 = 0\%$). Of the five studies reporting this outcome, two reported a statistically significant treatment effect. In one of these two studies, Hartwell, Fisher, and Deng (2009) examined the effects of the transition from a statewide to region-based service navigation program to help recently released prisoners with severe mental illness obtain postrelease medical, psychiatric, and other services (including housing). In the other study, Wenzlow and colleagues (2011) examined an intervention that assisted prisoners with serious mental illness with Medicaid and federal disability benefits before their release from prison. One additional study reported an increase in mental health service use (SMD 0.80; CI 0.72, 0.89; 1 study:...
Gilmer et al., 2012a) through continuous data, standardized by patient characteristics, that could not be pooled with the above RR categories. This study compared transition-age youth receiving mental health treatment through a normal adult program compared with those receiving treatment through a youth-focused program that coordinated care between the children’s and adult systems of care, provided health coaching on independent living and social skills, and gave access to youth peer support specialists who assisted in navigating treatment.

Figure 3.7 reports on primary care use across four identified studies that reported on the outcome.

Figure 3.7. Primary Care Use

Primary care use was measured in four studies. Effects of care transition interventions varied across these studies, and interventions were not associated with a statistically significant increase in the use of primary care services (RR 1.30; CI 0.69, 2.47; 5 studies: Binswanger et al., 2015; Jarrett et al., 2012; Kinner et al., 2016; MacInnes et al., 2021; Wang et al., 2012). The analysis detected considerable heterogeneity ($I^2 = 81\%$). Two of these four studies, by Kinner and colleagues (2016) and by MacInnes and colleagues (2021), reported statistically significant treatment effects. The Kinner study compared the effect of usual care for recently released prisoners with the effect of providing them with a booklet with personalized information on
reentry tasks, health needs, and local health services, as well as four weeks of health-coaching calls. The MacInnes study compared the effect of standard care, which only involved probation and housing coordination, to the RESET program, which additionally involved medication management and coordination with health care providers, on recently released prisoners.

Figure 3.8 reports on hospitalization/inpatient treatment across three identified studies that reported on the outcome.

The risk of hospitalization or inpatient treatment did not decline overall with the application of care coordination or service navigation interventions (RR 0.89; CI 0.49, 1.63; 4 studies: Binswanger et al., 2015; Hartwell, Fisher, and Deng, 2009; MacInnes et al., 2021; Wang et al., 2012). We detected low heterogeneity ($I^2 = 19\%$). In an additional study (Gilmer et al., 2012a) that could not be combined with the analysis, hospitalization/inpatient treatment did increase (SMD 0.14; CI 0.06, 0.22; one study: Gilmer et al., 2012a).
Figure 3.9 reports on emergency room/urgent care use across two identified studies that reported on the outcome.

The risk of emergency room or urgent care use also did not systematically decline with service navigation or care coordination treatment (RR 0.81; CI 0.03, 21.49; two studies: Binswanger et al., 2015; Wang et al., 2012). Heterogeneity in this analysis was moderate ($I^2 = 49\%$). In another study that could not be combined with the previous analysis, the intervention also had no effect on emergency or urgent care use (SMD 0.02; CI –0.06, 0.10; one study: Gilmer et al., 2012a).

Figure 3.10 reports on insurance coverage across two identified studies that reported on the outcome.
Across studies we found no statistically significant effect on insurance coverage (i.e., having health insurance after receiving the intervention), and the estimate was very imprecise (RR 2.15; CI 0.0, 20904; two studies: Binswanger et al., 2015; Wenzlow et al., 2011). The heterogeneity of the studies in this estimate was considerable ($I^2 = 92\%$), and results varied by study. One of the two studies reporting this outcome showed a positive effect. In this study, Wenzlow and colleagues (2011) conducted a difference-in-difference analysis of correctional facilities with a discharge planning program for inmates with serious mental illness and comparison facilities that had no such program. At the intervention facilities, discharge planners worked with inmates with serious mental illness to apply for federal disability benefits and Medicaid before their release.

Figure 3.11 reports on substance use service use across three identified studies that reported on the outcome.

Transition interventions were associated with an increase in the likelihood of receiving substance use services, although none of the three individual studies in this analysis reported a significant effect, and across studies the analysis was not statistically significant (RR 1.19; CI 0.86, 1.63; three studies: Jarret et al., 2012; Kinner et al., 2016; McKenna et al., 2015). There was no heterogeneity among these study results ($I^2 = 0\%$).
Figure 3.12 reports on patient self-efficacy/self-activation across two identified studies that reported on the outcome. One study explicitly measured patient activation (i.e., patient given choices of treatment to decide between), and the other measured patient perceptions of taking charge of their own health care.

The two identified studies reported conflicting results, and we did not detect a systematic effect on patient self-efficacy/self-activation (SMD 0.07; CI –4.74, 4.88; two studies: Gorter et al., 2015; Lemke et al., 2018). Heterogeneity in this analysis was considerable ($I^2 = 84\%$). Only one of these two studies reported a statistically significant effect (Lemke et al., 2018).

Several other outcomes were reported in only one study and therefore could not be used for meta-analyses aggregating data across studies. However, in these single studies, care transition interventions were not associated with an effect on quality of life (QOL) (SMD 0.13; CI –0.4, 0.65; one study: Kidd et al., 2019), emergency room/urgent care visits (SMD 0.02; CI –0.06, 0.10; one study: Gilmer et al., 2012a), patient satisfaction with care/intervention (SMD 0.07; CI –0.03, 0.17; one study: Lemke et al., 2018), patient perceptions of receiving needed care (RR –0.08; CI –0.22, 0.07; one study: Lemke et al., 2018; 31 percent of participants [no comparator]; one study: Tsai and Goggin, 2017), uptake of the intervention (RR 1.19; CI 0.87, 1.60; one study: Gorter et al., 2015), or logging on to a website to contact an intervention mentor (RR 0.86; CI 0.65, 1.13; one study: Gorter et al., 2015).
However, interventions were associated with increased outpatient mental health visits (SMD 0.80; CI 0.72, 0.89; one study: Gilmer et al., 2012a) and increased hospitalization/inpatient visits (SMD 0.14; CI 0.06, 0.22; one study: Gilmer et al., 2012a).

Adverse events were reported in only one study: six participants out of 31 experienced hospitalization or substance use relapse (Kidd et al., 2019). However, the intervention, consisting of case management, mental health support, and peer support, was unlikely to be related to these harms.

**Key Question 1a. What Are the Effects of Mental Health Care Transition Programs for Transitions from Military to Veteran Health Care Systems?**

Only Hourani and colleagues (2012) examined the effect of a service navigation program, the Transition Assistance Program. The authors evaluated the effect in a sample of Marine service members transitioning to civilian life. This program was associated with a decrease in mental health symptoms for the participating marines (RR 0.73; CI 0.62, 0.86; one study: Hourani et al., 2012).
Key Question 1b. Do the Effects Vary by Population?

Interventions were evaluated among service members, recently released prisoners, and children transitioning to adulthood. However, few studies examined the effects of transition interventions on the same outcomes within the same population. Meta-regressions indicated that interventions for children transitioning to adulthood had a greater effect on increased mental health service than interventions for recently released prisoners ($p = 0.04$). Other analyses on differential intervention effectiveness between populations could not be performed due to lack of data.

Hourani and colleagues (2012) conducted the only study on service members, described above under KQ1b.

Seven studies evaluated interventions for children transitioning to adulthood (Gilmer et al., 2012a; Harris et al., 2020; Gorter et al., 2015; Kidd et al., 2019; Lemke et al., 2018; Moosa and Sandhu, 2015; Sheidow, McCart, and Davis, 2016), but studies reported on different outcomes. One study found that a transition intervention was associated with increased mental health service use ($SMD 0.8; CI 0.72, 0.89$) and hospitalization ($SMD 0.14; CI 0.06, 0.22$) among children entering adulthood (Gilmer et al., 2012a). Another study found that a care transition intervention was associated with 38 percent of the original cohort of children receiving care for mental health successfully transitioning to adult care (Moosa and Sandhu, 2015). In a study of emerging adults with a serious mental illness and a history of involvement with the criminal justice system, 76 percent of recipients of a care transition intervention had success in controlling mental illness symptoms (Sheidow, McCart, and Davis, 2016). Mental health symptoms, QOL, physical health symptoms, emergency room use, patient satisfaction, and patient self-efficacy were not associated with effects of care transition interventions in children in the four separate studies that measured these outcomes (Gilmer et al., 2012a; Gorter et al., 2015; Kidd et al., 2019; Lemke et al., 2018). In the only study that measured intervention uptake, there was no effect for a general measure of uptake, or a measure of accessing a website to contact an intervention mentor, as described above in the KQ1 section on single-study outcomes (Gorter et al., 2015).

Ten studies individually evaluated the effects of transition interventions on prisoners (Binswanger et al., 2015; Kinner et al., 2016; Hartwell, Fisher, and Deng, 2009; Jarrett et al., 2012; MacInnes et al., 2021; McKenna et al., 2015; Sheidow, McCart, and Davis, 2016; Tsai and Goggin, 2017; Wang et al., 2012; Wenzlow et al., 2011). One study by Sheidow and colleagues (2016) found that an intervention reduced a lack of control over mental health symptoms (RR 0.24; CI 0.16, 0.36; one study: Sheidow, McCart, and Davis, 2016). In analyses of multiple studies, care transition interventions among prisoners had no effect on mental health service use, primary care use, insurance coverage, or substance use service use (Binswanger et al., 2015; Kinner et al., 2016; Hartwell, Fisher, and Deng, 2009; Jarrett et al., 2012; MacInnes et al., 2021; McKenna et al., 2015; Wang et al., 2012; Wenzlow et al., 2011). In single studies, interventions
had no effect on days when mental health symptoms were not good, on physical health symptoms, or on perceptions of receiving needed care. In one cross-sectional study without a comparator (Hourani et al., 2012), only 31 percent of participants reported received needed care, as described in the KQ1 single-study outcome above.

**Key Question 1c. Do the Effects Vary by Intervention Type?**

Evaluated interventions included health coaching, care coordination, and service navigation, as well as combinations of each intervention type. Meta-regressions did not indicate that the effect of combined health coaching and care coordination interventions on mental health service use differed systematically from the effects of interventions using health coaching, care coordination, and service navigation \((p = 0.50)\); health coaching and service navigation \((p = 0.50)\); service navigation and care coordination \((p = 0.56)\); and service navigation alone \((p = 0.63)\). For the outcome of primary care use, the effects of health coaching and care coordination interventions were not systematically different from effects of health coaching and service navigation interventions \((p = 0.69)\), care coordination and service navigation interventions \((p = 0.68)\), or interventions that employed service navigation alone \((p = 0.51)\). However, the findings should be interpreted with caution as few studies contributed to the analyses. Meta-regressions could not be run for the effects of interventions types on other outcomes.

Service navigation interventions alone, which were analyzed in four studies (Hartwell, Fisher, and Deng, 2009; Hourani et al., 2012; Wenzlow et al., 2011; Wang et al., 2012), were associated with reduced mental health symptoms (RR 0.73; CI 0.62, 0.86; one study: Hourani et al., 2012), and increased insurance coverage (RR 4.64; CI 2.17, 9.91; one study: Wenzlow et al., 2011). The interventions were not associated with a change in outpatient mental health service or primary care use.

Three studies (Kidd et al., 2019; Kinner et al., 2016; Gorter et al., 2015) evaluated combined health coaching and service navigation interventions. These interventions were associated with increased primary care use (RR 1.29; CI 1.11, 1.5; one study: Kinner et al., 2016), but not changes in mental health symptoms, QOL, physical health symptoms, mental health service use, substance use service use, patient self-efficacy, or in two measures of uptake.

Four studies that evaluated combined care coordination and service navigation interventions (Binswanger et al., 2015; Jarrett et al., 2012; Lemke et al., 2018; Moosa and Sandhu, 2015) found an increase in patient self-efficacy (SMD 0.42; CI 0.14, 0.69; one study: Lemke et al., 2018). This combined intervention was not associated with changes in mental or physical health symptoms, mental health service use, primary care use, insurance coverage, substance use service use, or patient satisfaction. Two studies of coaching and care coordination interventions reported a reduction in mental health symptoms (RR 0.24; CI 0.16, 0.36; one study: Sheidow, McCart, and Davis, 2016), and an increase in primary care use (RR 2.22; CI 1.37, 3.58; one study: MacInnes et al., 2021). MacInnes and colleagues reported that their intervention had no effect on mental health service use.
Among studies that evaluated interventions with all three components (Gilmer et al., 2012a; McKenna et al., 2015), outpatient mental health service (SMD 0.80; CI 0.72, 0.89; one study: Gilmer et al., 2012a) and inpatient service (SMD 0.14; CI 0.06, 0.22; one study: Gilmer et al., 2012a) use decreased, while emergency care, substance use service use, and a number of mental health service contacts were unchanged.

**Key Question 1d. Do the Effects Vary by Country?**

Interventions were evaluated in the United States, the United Kingdom, Canada, Australia, and New Zealand. Meta-regressions indicate that the effect of interventions studied in the United Kingdom ($p = 0.56$), Australia ($p = 0.73$), and New Zealand ($p = 0.72$) on mental health service use did not systematically differ from the effects of interventions studied in the United States. Interventions studied in the United Kingdom ($p = 0.46$) and Australia ($p = 0.85$) also did not differ in their effect on primary care use from studies reported in the United States. Effects of interventions on other outcomes by country could not be studied due to lack of data.

In the ten studies conducted in the United States (Binswanger et al., 2015; Gilmer et al., 2012a; Harris et al., 2020; Hartwell, Fisher, and Deng, 2009; Hourani et al., 2012; Lemke et al., 2018; Sheidow, McCart, and Davis, 2016; Tsai and Goggin, 2017; Wang et al., 2012; Wenzlow et al., 2011), interventions were associated with increased number of outpatient mental health visits (SMD 0.80; CI 0.72, 0.89; one study: Gilmer et al., 2012a), increased inpatient treatment (SMD 0.14; CI 0.06, 0.22; one study: Gilmer et al., 2012a) and increased patient self-efficacy (SMD 0.42; CI 0.14, 0.69; one study: Lemke et al., 2018). There was no association with changes in mental health symptoms, physical health symptoms, outpatient mental health service use, primary care use, emergency care use, insurance coverage, or patient satisfaction. Two studies conducted in the United Kingdom (Jarrett et al., 2012; MacInnes et al., 2021) indicated that care transition interventions increased primary care use (RR 2.24; CI 1.80, 2.78), but had no effect on mental health or substance abuse service use. In a third U.K. study (Moosa and Sandhu, 2015), 70 percent of children successfully transitioned to adult care after receipt of the intervention, but no comparison group or other outcomes were reported.

In two Canadian studies (Gorter et al., 2015; Kidd et al., 2019), interventions had no association with changes in mental health symptoms, QOL, physical health symptoms, patient self-efficacy, or measures of intervention uptake. In an Australian study (Kinner et al., 2016), a service navigation booklet and phone health coaching intervention provided to recently released prisoners increased primary care use (RR 1.29; CI 1.11, 1.5), but not outpatient mental health service use or substance use service use. In a study conducted in New Zealand (McKenna et al., 2015), the evaluated intervention had no association with changes in mental health service use or substance use service use.
4. Discussion

This systematic review and meta-analysis identified all studies that evaluated the effects of mental health care transition interventions on health, health care, patient, and adverse event outcomes among military service members, veterans, prisoners, and children transitioning to adulthood. We identified only seventeen studies reporting on a variety of outcomes, and found a main effect of increased mental health service use.

Summary of Findings

The summary of findings and the evaluation of the quality of evidence are documented in detail in Table 4.1.

In main analyses of care transition interventions, we found an effect of increased mental health service use. Interventions had no effect on any other health, health care, patient experience, or adverse event outcome across pooled studies. Risk of bias was judged to be low in one study, moderate or unclear in four studies, and high in twelve studies. Among pooled analyses, quality of the evidence was moderate for consistent changes in outpatient mental health service use, high for no consistent changes in hospitalization/inpatient treatment, and moderate for no consistent change in primary care use, emergency room/urgent care use, and substance use service use. Our confidence in effect estimates of the remaining outcomes in pooled analyses was low or very low. Analyses that contained at least one RCT could obtain a maximum of a high quality of evidence rating, while analyses of only observational studies could only be rated as low quality at best.

In main analyses of single studies, outpatient mental health service use increased in two of the six studies measuring that outcome. In another study, a combined intervention of coaching, service navigation, and care coordination for children in transition was associated with increased mental health service use, hospitalization, and inpatient treatment. This intervention was also associated with a decrease in mental health symptoms. However, findings from single studies should be interpreted with caution, as the quality of evidence in all single study analyses was low or very low. In our ratings of quality of evidence, single studies analyses can attain a maximum of moderate quality, because the consistency of effects between studies cannot be judged. Studies on three populations—military service members, children in transition, and prisoners leaving incarceration—were very different in composition and were analyzed by population group. No study examined veterans exclusively; one examined veterans in prison (Tsai and Goggin, 2017). Meta-regressions indicated that interventions increased mental health service use by a greater amount among children in transition than among recently released prisoners. No differences were found for primary care service use. Meta-regression analyses on differential
intervention effectiveness for other outcomes across populations could not be performed due to lack of data. In our meta-analyses within each population category, we found that interventions were associated with reduced mental health symptoms among service members transitioning to veteran status, with reduced mental health symptoms and increased mental health service use among prisoners leaving incarceration, and with decreased mental health service use and hospitalization/inpatient treatment among children transitioning to adulthood.

Interventions were not uniform, but they could be grouped into three types: care coordination, health coaching, and service navigation. Service navigation interventions alone were associated with reduced mental health symptoms and increased insurance coverage. We also examined all possible combinations of the three types. One that combined health coaching and service navigation interventions was associated with increased primary care use. A combined care coordination and service navigation intervention increased patient self-efficacy/activation. Care coordination and health coaching interventions were associated with improved mental health symptoms and increased primary care service use.

A combination intervention that included all three types (care coordination, health coaching, and service navigation) was associated with increased mental health service use and hospitalization/inpatient treatment. According to meta-regression analyses, intervention type or combinations of types were not associated with differences in effectiveness in outpatient mental health service use and primary care use. Meta-regression analyses for other outcomes could not be run due to the lack in overlap in outcomes across studies.

Effectiveness may have varied due to country-level contextual factors such as political, social, economic, and legal systems, as well as cultural differences related to the perception of military service, attitudes toward mental health care and care seeking, and the role of social support during transitions. We therefore conducted a limited number of meta-regressions, when possible, to determine the effect of country on outcomes of interest. According to these pooled meta-regressions, intervention effectiveness on outpatient mental health service use or primary care use did not differ between countries. However, in within-country meta-analyses, we found that interventions in the United States were associated with increased mental health use and hospitalization/inpatient treatment and with increased patient self-efficacy/self-activation. In other meta-analyses, separate interventions in the United Kingdom and in Australia were associated with increased primary care use. In other studies in the United Kingdom, Canada, and New Zealand, interventions were not associated with effects on outcomes.

Most multistudy subgroup analyses were rated as low or very low quality. Only multistudy subgroup analyses of primary care use in the United States and in the United Kingdom, and mental health, primary care, and substance use service use among prisoners were rated as moderate or high quality.
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<tr>
<td>Mental health symptoms (RR)</td>
<td>2 studies N = 5,556</td>
<td>Downgraded by 2 for inconsistency (considerable heterogeneity) and study limitations</td>
<td>RR 0.43 (CI 0.473), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Mental health symptoms (SMD)</td>
<td>2 studies N = 71</td>
<td>Downgraded by 2 for inconsistency (considerable heterogeneity) and study limitations</td>
<td>RR 0.74 (CI 0.01, 37.30), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Physical health symptoms</td>
<td>2 studies N = 71</td>
<td>Downgraded by 2 for imprecision and study limitations</td>
<td>SMD 0.26 (CI –4.61, 4.08), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Quality of life (QOL)</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.13 (CI –0.40, 0.65), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Outpatient mental health service use (RR)</td>
<td>6 studies N = 2,411 + 957 episodes of care</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 1.27 (CI 1.02, 1.57), favoring intervention</td>
<td>Moderate</td>
</tr>
<tr>
<td>Outpatient mental health service use (SMD)</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.80 (CI 0.72, 0.89), favoring intervention</td>
<td>Very low</td>
</tr>
<tr>
<td>Primary care use</td>
<td>5 studies N = 1,887</td>
<td>Downgraded by 1 for inconsistency (substantial heterogeneity)</td>
<td>RR 1.30 (CI 0.69, 2.47), no consistent effect</td>
<td>Moderate</td>
</tr>
<tr>
<td>Hospitalization/ inpatient treatment (RR)</td>
<td>4 studies N = 302 + 957 episodes of care</td>
<td>None</td>
<td>RR 0.89 (CI 0.49, 1.63), no consistent effect</td>
<td>High</td>
</tr>
<tr>
<td>Hospitalization/ inpatient treatment (SMD)</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.14 (CI 0.06, 0.22), favoring intervention</td>
<td>Very low</td>
</tr>
<tr>
<td>Emergency room/ urgent care use (RR)</td>
<td>2 studies N = 240</td>
<td>Downgraded by 1 for imprecision</td>
<td>RR 0.81 (CI 0.03, 21.49), no consistent effect</td>
<td>Moderate</td>
</tr>
<tr>
<td>Emergency room/ urgent care use (SMD)</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.02 (CI –0.06, 0.10), favoring neither</td>
<td>Very low</td>
</tr>
<tr>
<td>Insurance coverage</td>
<td>2 studies N = 726</td>
<td>Downgraded by 2 for inconsistency (considerable heterogeneity) and imprecision</td>
<td>RR 2.15 (CI 0.00, 20904), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Substance use service use</td>
<td>3 studies N = 1,663</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 1.19 (CI 0.86, 1.63), no consistent effect</td>
<td>Moderate</td>
</tr>
<tr>
<td>Patient satisfaction with care/intervention</td>
<td>1 study N = 209</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>SMD 0.07 (CI –0.03, 0.17), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Receiving needed care</td>
<td>1 study N = 209</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR –0.08 (CI –0.22, 0.07), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>KQ Comparison Outcome</td>
<td>Number of Studies and Citation</td>
<td>Reasons for Downgrading or Upgrading Quality</td>
<td>Findings: Direction/ Magnitude of Effect</td>
<td>GRADE</td>
</tr>
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</tr>
<tr>
<td>Patient self-efficacy/self-activation</td>
<td>2 studies N = 259</td>
<td>Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations</td>
<td>SMD 0.07 (CI –4.74, 4.88), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Use/uptake of intervention overall</td>
<td>1 study N = 50</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 1.19 (CI 0.87, 1.63), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Accessing intervention website</td>
<td>1 study N = 50</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 0.86 (CI 0.65, 1.13), no consistent effect</td>
<td>Very low</td>
</tr>
</tbody>
</table>

**KQ1a. Effects of MHS to VA transitions**

| Mental health symptoms | 1 study N = 5,476 | Downgraded by 1 for study limitations | RR 0.73 (CI 0.62, 0.86), favoring intervention | Very low |

**KQ1b. Do the effects vary by population?**

<p>| Children: mental health symptoms (SMD) | 1 study N = 31 | Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified | SMD 0.01 (CI –0.53, 0.56), favoring neither | Low |
| Children: quality of life | 1 study N = 31 | Downgraded by 1 for study limitations | SMD 0.13 (CI –0.40, 0.65), no consistent effect | Very low |
| Children: physical health symptoms | 1 study N = 31 | Downgraded by 1 for study limitations | SMD 0.00 (CI –0.54, 0.54), favoring neither | Very low |
| Children: outpatient mental health service use (SMD) | 1 study N = 2,505 | Downgraded by 1 for study limitations | SMD 0.80 (CI 0.72, 0.89), favoring intervention | Very low |
| Children: hospitalization/inpatient treatment | 1 study N = 2,505 | Downgraded by 1 for study limitations | SMD 0.14 (CI 0.06, 0.22), favoring intervention | Very low |
| Children: emergency room/urgent care use | 1 study N = 2,505 | Downgraded by 1 for study limitations | SMD 0.02 (CI –0.06, 0.1), favoring neither | Very low |
| Children: patient satisfaction with care/intervention | 1 study N = 209 | Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified | RR 1.07 (CI 0.97, 1.18), favoring neither | Low |
| Children: patient self-efficacy/self-activation | 2 studies N = 259 | Downgraded by 2 for imprecision and study limitations | SMD 0.07 (CI –4.74, 4.88), favoring neither | Low |
| Children: use/uptake of intervention overall | 1 study N = 50 | Downgraded by 1 for study limitations | RR: 1.19 (CI 0.87, 1.63), no consistent effect | Very low |
| Children: accessing intervention website | 1 study N = 50 | Downgraded by 1 for study limitations | RR: 0.86 (CI 0.65, 1.13), no consistent effect | Very low |
| Prisoners: mental health symptoms (RR) | 1 study N = 80 | Downgraded by 1 for study limitations | RR 0.24 (CI 0.16, 0.36), favoring intervention | Very low |
| Prisoners: mental health symptoms (SMD) | 1 study N = 40 | Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified | SMD –0.54 (CI –1.42, 0.33), no consistent effect | Low |</p>
<table>
<thead>
<tr>
<th>KQ Comparison Outcome</th>
<th>Number of Studies and Citation</th>
<th>Reasons for Downgrading or Upgrading Quality</th>
<th>Findings: Direction/ Magnitude of Effect</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prisoners: physical health symptoms</td>
<td>1 study N = 40</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>SMD $-0.71$ (CI $-1.59, 0.18$), no consistent effect</td>
<td>Low</td>
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<tr>
<td>Prisoners: outpatient mental health service use</td>
<td>6 studies N = 2,411 + 957 episodes of care + not reported (NR)</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR $1.27$ (CI $1.02, 1.57$), favoring intervention</td>
<td>Moderate</td>
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<tr>
<td>Prisoners: primary care use</td>
<td>5 studies N = 1,687</td>
<td>Downgraded by 1 for inconsistency (substantial heterogeneity)</td>
<td>RR $1.3$ (CI $0.69, 2.47$), no consistent effect</td>
<td>Moderate</td>
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<tr>
<td>Prisoners: insurance coverage</td>
<td>2 studies N = 726</td>
<td>Downgraded by 2 for inconsistency (considerable heterogeneity) and study limitations</td>
<td>RR $2.15$ (CI $0, 20904$), no consistent effect</td>
<td>Low</td>
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<tr>
<td>Prisoners: substance use service use</td>
<td>3 studies N = 1,663</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR $1.19$ (CI $0.86, 1.63$), no consistent effect</td>
<td>Moderate</td>
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<tr>
<td>Prisoners: receiving needed care</td>
<td>1 study N = 209</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR $-0.08$ (CI $-0.22, 0.07$), no consistent effect</td>
<td>Low</td>
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<tr>
<td><strong>KQ1c. Do the effects vary by intervention type?</strong></td>
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</tr>
<tr>
<td>All intervention types: outpatient mental health service use (RR)</td>
<td>1 study N = 278</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR $1.15$ (CI $0.91, 1.46$), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
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</tr>
<tr>
<td>All intervention types: outpatient mental health service use (SMD)</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.80$ (CI $0.72, 0.89$), favoring intervention</td>
<td>Very low</td>
</tr>
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<tr>
<td>All intervention types: hospitalization/inpatient treatment</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.14$ (CI $0.06, 0.22$), favoring intervention</td>
<td>Very low</td>
</tr>
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</tr>
<tr>
<td>All intervention types: emergency room/urgent care use</td>
<td>1 study N = 2,505</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.02$ (CI $-0.06, 0.10$), favoring neither</td>
<td>Very low</td>
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</tr>
<tr>
<td>All intervention types: substance use service use</td>
<td>1 study N = 278</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR $1.17$ (CI $0.62, 2.20$), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
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</tr>
<tr>
<td>Health coaching and service navigation: mental health symptoms</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.01$ (CI $-0.53, 0.56$), favoring neither</td>
<td>Very low</td>
</tr>
<tr>
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</tr>
<tr>
<td>Health coaching and service navigation: quality of life (QOL)</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.13$ (CI $-0.40, 0.65$), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
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</tr>
<tr>
<td>Health coaching and service navigation: physical health symptoms</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD $0.00$ (CI $-0.54, 0.54$), favoring neither</td>
<td>Very low</td>
</tr>
<tr>
<td>KQ Comparison Outcome</td>
<td>Number of Studies and Citation</td>
<td>Reasons for Downgrading or Upgrading Quality</td>
<td>Findings: Direction/ Magnitude of Effect</td>
<td>GRADE</td>
</tr>
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</tr>
<tr>
<td>Health coaching and service navigation: outpatient mental health service use</td>
<td>1 study $N = 1,325$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.18 (CI 0.81, 1.72), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Health coaching and service navigation: primary care use</td>
<td>1 study $N = 1,325$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.29 (CI 1.11, 1.50), favoring intervention</td>
<td>Low</td>
</tr>
<tr>
<td>Health coaching and service navigation: substance use service use</td>
<td>1 study $N = 1,325$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.15 (CI 0.82, 1.63), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Health coaching and service navigation: patient self-efficacy /self-activation</td>
<td>1 study $N = 50$</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD –0.34 (CI –0.87, 0.19), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Health coaching and service navigation: use/uptake of intervention overall</td>
<td>1 study $N = 50$</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 1.19 (CI 0.87, 1.63), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Health coaching and service navigation: accessing intervention website</td>
<td>1 study $N = 50$</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 0.86 (CI 0.65, 1.13), no consistent effect</td>
<td>Very low</td>
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<tr>
<td>Care coordination and service navigation: mental health symptoms</td>
<td>1 study $N = 40$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>SMD –0.54 (CI –1.42, 0.33), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Care coordination and service navigation: physical health symptoms</td>
<td>1 study $N = 40$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>SMD –0.71 (CI –1.59, 0.18), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Care coordination and service navigation: outpatient mental health service use</td>
<td>2 studies $N = 60 + NR$</td>
<td>Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations</td>
<td>RR 16.51 (CI 0.00, 1049326688614012), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Care coordination and service navigation: primary care use</td>
<td>2 studies $N = 100$</td>
<td>Downgraded by 3 for inconsistency (substantial heterogeneity), imprecision, and study limitations</td>
<td>RR 1.30 (CI 0.00, 3632), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Care coordination and service navigation: insurance coverage</td>
<td>1 study $N = 40$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.09 (CI 0.85, 1.40), favoring neither</td>
<td>Low</td>
</tr>
<tr>
<td>Care coordination and service navigation: substance use service use</td>
<td>1 study $N = 60$</td>
<td>Downgraded by 2 for imprecision and study limitations</td>
<td>RR 1.87 (CI 0.50, 6.96), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>KQ Comparison Outcome</td>
<td>Number of Studies and Citation</td>
<td>Reasons for Downgrading or Upgrading Quality</td>
<td>Findings: Direction/Magnitude of Effect</td>
<td>GRADE</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Care coordination and service navigation: patient satisfaction with care/intervention</td>
<td>1 study $N = 209$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.07 (CI 0.97, 1.18), favoring neither</td>
<td>Low</td>
</tr>
<tr>
<td>Care coordination and service navigation: patient self-efficacy/self-activation</td>
<td>1 study $N = 209$</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>SMD 0.42 (CI 0.14, 0.69), favoring intervention</td>
<td>Low</td>
</tr>
<tr>
<td>Health coaching and care coordination: mental health symptoms</td>
<td>1 study $N = 80$</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 0.24 (CI 0.16, 0.36), favoring intervention</td>
<td>Very low</td>
</tr>
<tr>
<td>Health coaching and care coordination: primary care use</td>
<td>1 study $N = 62$</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 2.22 (CI 1.37, 3.58), favoring intervention</td>
<td>Very low</td>
</tr>
<tr>
<td>Service navigation alone: mental health symptoms</td>
<td>1 study $N = 5,476$</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 0.73 (CI 0.62, 0.86), favoring intervention</td>
<td>Very low</td>
</tr>
<tr>
<td>Service navigation alone: outpatient mental health service use</td>
<td>2 studies $N = 686 + 957$</td>
<td>Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations</td>
<td>RR 2.97 (CI 0.00, 451383), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Service navigation alone: primary care use</td>
<td>1 study $N = 200$</td>
<td>Downgraded by 1 as inconsistency could not be determined as only one study was identified</td>
<td>RR 0.80 (CI 0.58, 1.11), no consistent effect</td>
<td>Moderate</td>
</tr>
<tr>
<td>Service navigation alone: insurance coverage</td>
<td>1 study $N = 686$</td>
<td>Downgraded by 2 for imprecision and study limitations</td>
<td>RR 4.64 (CI 2.17, 9.91), favoring intervention</td>
<td>Very low</td>
</tr>
</tbody>
</table>

**KQ1d. Do the effects vary by country?**

<p>| KQ: U.S. mental health symptoms (RR)                                                | 2 studies $N = 5,556$         | Downgraded by 2 for imprecision and study limitations                                                          | RR 0.43 (CI 0.00, 473), no consistent effect       | Very low |
| KQ: U.S. mental health symptoms (SMD)                                               | 1 study $N = 40$              | Downgraded by 1 as inconsistency could not be determined as only one study was identified                      | SMD –0.54 (CI –1.42, 0.33), no consistent effect   | Moderate |
| KQ: U.S. physical health symptoms (SMD)                                              | 1 study $N = 40$              | Downgraded by 1 as inconsistency could not be determined as only one study was identified                      | SMD –0.71 (CI –1.59, 0.18), no consistent effect   | Moderate |
| KQ: U.S. outpatient mental health service use (RR)                                   | 2 studies $N = 686 + 957$     | Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations              | RR 2.97 (CI 0.00, 451383), no consistent effect    | Very low |
| KQ: U.S. outpatient mental health service use (SMD)                                  | 1 study $N = 2,505$           | None                                                                                                            | SMD 0.80 (CI 0.72, 0.89), favoring intervention    | Low     |
| KQ: U.S. primary care use                                                             | 2 studies $N = 240$           | Downgraded by 1 for study limitations                                                                          | RR 0.79 (CI 0.41, 1.52), no consistent effect      | Moderate |</p>
<table>
<thead>
<tr>
<th>KQ Comparison Outcome</th>
<th>Number of Studies and Citation</th>
<th>Reasons for Downgrading or Upgrading Quality</th>
<th>Findings: Direction/Magnitude of Effect</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.: hospitalization/inpatient treatment</td>
<td>1 study N = 2,505</td>
<td>None</td>
<td>SMD 0.14 (CI 0.06, 0.22), favoring intervention</td>
<td>Low</td>
</tr>
<tr>
<td>U.S.: emergency/urgent care use</td>
<td>1 study N = 2,505</td>
<td>None</td>
<td>SMD 0.02 (CI –0.06, 0.10), favoring neither</td>
<td>Low</td>
</tr>
<tr>
<td>U.S.: insurance coverage</td>
<td>2 studies N = 726</td>
<td>Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations</td>
<td>RR 2.15 (CI 0, 20904), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>U.S.: patient satisfaction with care/intervention</td>
<td>1 study N = 209</td>
<td>Downgraded by 1 as inconsistency could not be determined as only one study was identified</td>
<td>RR 1.07 (CI 0.97, 1.18), favoring neither</td>
<td>Moderate</td>
</tr>
<tr>
<td>U.S.: patient self-efficacy/self-activation</td>
<td>1 study N = 209</td>
<td>Downgraded by 1 as inconsistency could not be determined as only one study was identified</td>
<td>SMD 0.42 (CI 0.14, 0.69), favoring intervention</td>
<td>Moderate</td>
</tr>
<tr>
<td>U.K.: outpatient mental health service use</td>
<td>2 studies N = 60 + NR</td>
<td>Downgraded by 3 for inconsistency (considerable heterogeneity), imprecision, and study limitations</td>
<td>RR 16.51 (CI 0.00, 1049326688614012), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>U.K.: primary care use</td>
<td>2 studies N = 122</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR 2.24 (CI 1.80, 2.78), favoring intervention</td>
<td>Moderate</td>
</tr>
<tr>
<td>U.K.: substance use service use</td>
<td>1 study N = 60</td>
<td>Downgraded by 2 for imprecision and study limitations</td>
<td>RR 1.87 (CI 0.5, 6.96), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Canada: mental health symptoms</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.01 (CI –0.53, 0.56), favoring neither</td>
<td>Very low</td>
</tr>
<tr>
<td>Canada: quality of life</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0.13 (CI –0.40, 0.65), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Canada: physical health symptoms</td>
<td>1 study N = 31</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD 0 (CI –0.54, 0.54), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Canada: patient self-activation/self-efficacy</td>
<td>1 study N = 50</td>
<td>Downgraded by 1 for study limitations</td>
<td>SMD –0.34 (CI –0.87, 0.19), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Canada: use/uptake of intervention overall</td>
<td>1 study N = 50</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 1.19 (CI 0.87, 1.63), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Canada: accessing intervention website</td>
<td>1 study N = 50</td>
<td>Downgraded by 1 for study limitations</td>
<td>RR: 0.86 (CI 0.65, 1.13), no consistent effect</td>
<td>Very low</td>
</tr>
<tr>
<td>Australia: outpatient mental health service use</td>
<td>1 study N = 1,325</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.18 (CI 0.81, 1.72), no consistent effect</td>
<td>Low</td>
</tr>
<tr>
<td>Australia: primary care use</td>
<td>1 study N = 1,325</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.29 (CI 1.11, 1.50), favoring intervention</td>
<td>Low</td>
</tr>
<tr>
<td>Australia: substance use service use</td>
<td>1 study N = 1,325</td>
<td>Downgraded by 2 for study limitations and inconsistency, which could not be determined as only one study was identified</td>
<td>RR 1.15 (CI 0.82, 1.63), no consistent effect</td>
<td>Low</td>
</tr>
</tbody>
</table>
### Results in the Context of Other Reviews

We did not find any other general reviews of care transition interventions that evaluated the transition between health care systems rather than care coordination within organizations. However, several reviews did examine specific intervention types. Jia and colleagues (2014), in their Cochrane review, examined the effect of service navigation interventions on insurance coverage for vulnerable populations (including children, women, the elderly, racial and ethnic minorities, low-income individuals). They found that controlled trials evaluating these interventions improved insurance coverage among participants (Jia et al., 2014). In our review, few interventions evaluated insurance coverage as an outcome, and we did not find a main effect on the outcome. However, insurance coverage increased in one of the two studies evaluated.

While we did not find any reviews of health coaching interventions specific to transitions, health coaching in general is well-supported by evidence. Kivela and coauthors found 13 RCTs and quasi-experimental studies evaluating health coaching interventions for adults with chronic conditions (Kivela, Kyngas, and Kaariainen, 2014). Through a qualitative analysis, they reported that health coaching improved physiological, behavioral, psychological, or social outcomes in 85 percent of the included studies. Improved psychological outcomes included patient self-efficacy and reduced mental health symptoms. In another review, Hill and colleagues reported that 15 of 16 RCTs evaluating health coaching interventions reported a change in health-related outcomes (Hill, Richardson, and Skouteris, 2015). We found no studies that evaluated health coaching interventions alone, but among those that contained health coaching, we found mixed effects on mental health symptoms and mental health service use and increases in hospitalization and use of primary care.

We also did not find any review of care coordination interventions specific to health care transitions. However, care coordination in general is a well-researched topic. In an AHRQ-funded qualitative review of 75 reviews on care coordination (McDonald et al., 2007), authors found that care coordination interventions generally improved health and health care outcomes across a wide range of conditions. We found no evaluations of pure care coordination interventions for patients in transition, but among interventions that contained care coordination, we found increases...
in primary care and inpatient service use, as well as an increase in patient self-activation/efficacy. Effects on outpatient mental health service use were mixed.

Implications for Research and Practice

Our review addressed important questions and identified relevant studies to inform practice. However, the number of identified studies was small and several analyses were hindered by the small number of studies within subgroups. In addition, the review addressed several complex outcomes. Service use is a context-dependent outcome, and interventions may target the increase of service use (e.g., successful transition to a mental health care provider) or the avoidance of service use (e.g., hospitalization or inpatient treatment). Even increases in outpatient mental health or primary care visits may be considered a waste of resources (Berwick and Hackbarth, 2012) if patients do not experience improvement in mental health symptoms. Nonetheless, it is likely that mental health care transition interventions increase service use (especially mental health service use) by coaching patients to receive appropriate care or by helping patients navigate/coordinate care changes. The broad spectrum change of different types of care usage, from less expensive (outpatient primary care) to more expensive (hospitalization) (Kaiser Family Foundation, 2014), highlights the imprecise treatment effect of the interventions in this review. These interventions tried to help patients obtain care in many different ways, without any consistent regard for treatment effectiveness or cost.

Most studies evaluated in this review were judged to have high, moderate, or unclear risk of bias. In the only study in our review to be rated as having a low risk of bias, a service use navigation intervention reduced emergency care use (Wang et al., 2012). Patients in the intervention group were allocated to a transitions clinic that referred them to an expedited primary care appointment and gave them access to community health workers who assisted patients in navigating pharmacies, social services, and medical and behavioral health appointments. Patients allocated to the control group received only an expedited primary care appointment. Primary care utilization did not differ between groups. The success of this intervention in reducing more expensive emergency service use highlights the importance of helping patients navigate their care but findings are based on a limited body of evidence. More high-quality research on mental health care transitions is needed, especially across a wider range of outcomes, to facilitate an understanding of the effects of these interventions. Future research should also clarify how transition interventions can direct patients toward specific types of treatment in the evolving care environment, especially toward treatment that is appropriate for their condition.

We also note that some of the effect estimates were very imprecise because only a small number of studies were identified, and the effect estimates varied substantially across studies. The effect estimates are based on random effects meta-analysis models that assume that the identified studies are random samples of the true population of interest. The effect estimates aim
to determine the true effect rather than averaging the identified individual results; hence the CI for the pooled effects are very imprecise and highlight that the estimate of the size of the true effect may vary considerably based on the current limited information. Future studies have to contribute to the evidence base to determine more precise estimates for interventions aiming to facilitate transitions between health care systems.

In practice, several barriers can limit care transitions, including stigma against the treatment of mental illnesses in the military and the complexity of health care in the United States (Institute of Medicine, 2013). Even in the Warrior Transition Unit for rehabilitation of physically or psychologically wounded service members, stigma against mental illnesses can be widespread. In one study, 72 percent of soldiers in command of the unit and 27 percent of nurse case managers in the unit believed that soldiers who reported symptoms of posttraumatic stress disorder were either faking or exaggerating their illness (Stahl, 2009). This widespread military stigma against the diagnosis and treatment of mental illnesses likely creates barriers that hinder service member mental health care transitions, even if interventions to facilitate transition are available.

The mix of health care systems in the United States can be complicated and confusing and having an expert help in mental health care transition has the potential to benefit many patients. Transition interventions can help patients to continue to receive care, likely by increasing their awareness and motivation and by reducing complexity in the process (Jia et al., 2014; McDonald et al., 2007; Kivela, Kyngas, and Kaariainen, 2014). As no single system is fully responsible for patients during the transition, these interventions could help fill the unmet need for support when patients are between systems.

Weaknesses and Limitations

This review has many strengths, including its analysis of an understudied topic and its consideration of multiple populations to expand the evidence base. However, it also has several limitations. One is in the mixing of nonveteran populations to estimate the effect of care transition interventions on veterans. This review was also limited by lack of literature on transition interventions. Mental health care transitions between military service and veteran status are not well studied. This gap in research has been persistent, as noted in the 2013 Institute of Medicine report on service member and veteran readjustment. The authors stated that numerous programs exist to respond to the needs of active-duty personnel returning from Afghanistan and Iraq, veterans, and family members, but there is little evidence regarding their effectiveness (Institute of Medicine, 2013). The review also includes non-RCT studies, which precludes the estimation of causal intervention effects. We found a wide range of outcomes across studies, but this prevented many meta-analyses or led to meta-analyses of very few studies. Finally, there was a wide variation in study quality, which may have prevented the detection of effects due to the overrepresentation of poor-quality studies for particular outcomes.
Conclusion

Transitions in life can be difficult, but mental health conditions make these transitions even more challenging. Patients with mental health conditions who undergo a transition such as separation from military service or aging out of foster care must obtain health care in a new system and manage their mental health condition alone while between systems. Care transition support interventions may help patients through health coaching, service navigation, and care coordination. In our review, we found no systematic effect of transition interventions across outcomes and studies, but interventions may be associated with increased outpatient mental health service use. Indirect comparisons across populations were hindered by the small number of studies in included patient subgroups. The evidence base is limited and most analyses were rated as low or very low quality of evidence. Additional research on interventions for care transitions among patients with mental health conditions is needed. Care transition interventions show promise for individual outcomes, but more research on this population is needed, especially as these patients are often no system’s responsibility as they go through their transition.
Appendix A. Search Strategies

Across Populations

PubMed
3/31/2021
No restrictions
((insurance[Title] OR “health plan”[Title] OR “health plans”[Title] OR Healthcare[Title] OR
“health care”[Title] OR “mental health”[Title])) AND (transition[Title])

PsycINFO; phrase searching
3/31/2021
No restrictions
TI (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental
health”)
AND
TI (transition)

Web of Science
3/31/2021
Indexes=SCI-EXPANDED, SSCI, A&HCI, BKCI-S, BKCI-SSH
Article, Review, Book Chapter
TI=(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental
health”)
AND TI=(“transition”)

Defense Technical Information Center
Classified DTIC
3/31/2021
CITATION SEARCH TERM (CST) Query
Distribution A—Approved for Public Release
Technical Reports and Projects
CST ((insurance OR “health plan” OR “health plans” OR health care OR “health care” OR “mental
health”) AND (transition))

Cochrane Database of Systematic Reviews
3/31/2021
(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental
health”):ti,ab,kw
AND
(transition*):ti,ab,kw
Campbell Collaboration Systematic Registry—via Wiley Online
3/31/2021
Advanced Search
Anywhere: insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”
AND
Anywhere: transition*

Open Science Framework
3/31/2021
OSF Registries ONLY
(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
(transition*)

PROSPERO
3/31/2021
No restrictions
insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”
AND
transition*

Transition from Military Health System to Veterans Health Administration

PubMed (new platform)
3/31/2021
(insurance[Title/abstract] OR “health plan”[Title/abstract] OR “health plans”[Title/abstract] OR Healthcare[Title/abstract] OR “health care”[Title/abstract] OR “mental health” [Title/abstract])
AND (transition*[Title/abstract] OR reintegration[Title/abstract] OR reintegration[Title/abstract])
AND (military[title/abstract] OR veteran*[title/abstract] OR soldier*[title/abstract])

PsycINFO
3/31/2021
phrase searching
no restrictions
TI (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”) OR AB (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
((TI(transition* OR re-integration OR re-integration) OR (TI(“military hospital” OR DoD) AND TI(“veterans health” OR “VA health” OR “VA mental health” OR “VA aftercare” OR “VA healthcare”))
OR
(AB(transition* OR re-integration OR re-integration) OR (AB(“military hospital” OR DoD) AND AB(“veterans health” OR “VA health” OR “VA mental health” OR “VA aftercare” OR “VA healthcare”))
OR
(TI(transition* OR re-integration OR re-integration) OR (TI(“military hospital” OR DoD) AND AB(“veterans health” OR “VA health” OR “VA mental health” OR “VA aftercare” OR “VA healthcare”))
OR
(AB(transition* OR re-integration OR re-integration) OR (AB(“military hospital” OR DoD) AND TI(“veterans health” OR “VA health” OR “VA mental health” OR “VA aftercare” OR “VA healthcare”)))
AND
TI (military OR veteran* OR soldier*) OR AB(military OR veteran* OR soldier*)

Web of Science
3/31/2021
Indexes=SCI-EXPANDED, SSCI, A&HCI, BKCI-S, BKCI-SSH
Article, Review, Book Chapter, early access
TS=(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
(TS=(transition* OR reintegration OR re-integration) OR (TS=(“military hospital” OR DoD) AND TS=(“veterans health” OR “VA health” OR “VA mental health” OR “VA aftercare” OR “VA healthcare”)))
AND
TS=(military OR veteran* OR soldier*)

Uninsured Veterans
PubMed
4/6/2021
No Restrictions
uninsured[Title/abstract] OR un-insured[Title/abstract] OR medically uninsured[MeSH]
AND
PsycINFO  
4/6/2021  
No Restrictions  
TI (uninsured OR un-insured) OR AB (uninsured OR un-insured)  
AND  
TI (military OR veteran* OR solider* OR “service member*” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”) OR AB (military OR veteran* OR solider* OR “service member*” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”)

Web of Science  
4/6/2021  
No Restrictions  
TS = (uninsured OR un-insured)  
AND  
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Cochrane Database of Systematic Reviews  
4/6/2021  
(Uninsured or un-insured):ti,ab,kw OR medically uninsured[Mesh]  
AND  
(military OR veteran* OR solider* OR “service member*” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”):ti,ab,kw OR “United States Department of Veterans Affairs”[Mesh])

Campbell Collaboration Systematic Registry—via Wiley Online  
4/6/2021  
Advanced Search  
Abstract: (uninsured OR un-insured)  
AND  
Abstract: (military OR veteran* OR solider* OR “service member*” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”)

41
Open Science Framework  
2020–present (4/6/2021)  
OSF Registries ONLY  
(Uninsured OR “un-insured”)  
AND  
(military OR veteran* OR soldier* OR “service member” OR “Service members” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”)

PROSPERO:  
3/31/2021  
#1 (uninsured or un-insured)  
#2 (MeSH DESCRIPTOR Medically Uninsured EXPLODE ALL TREES)  
#3 #1 OR #2  
#4 (MeSH DESCRIPTOR United States Department of Veterans Affairs EXPLODE ALL TREES)  
#5 (military OR veteran* OR soldier* OR “service member” OR “Service members” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”)  
#6 #4 OR #5  
#7 #3 AND #6

Classified DTIC  
3/31/2021  
CITATION SEARCH TERM (CST) Query  
Distribution A – Approved for Public Release  
Technical Reports and Projects  
CST((uninsured OR “un-insured”) AND (military OR veteran OR veterans OR soldier OR soldiers OR “service member” OR “service members” OR “service person” OR “service man” OR serviceman OR “service woman” OR servicewoman OR “service men” OR servicemen OR “service women” OR servicewomen OR “VA health” OR “VA mental health” OR “VA healthcare” OR “VA aftercare”))

Classified DTIC  
3/31/2021  
CITATION SEARCH TERM (CST) Query  
Distribution A – Approved for Public Release  
Technical Reports and Projects  
CST ((insurance OR “health plan” OR “health plans” OR healthcare OR “health care” OR “mental health”) AND (transition))
Other Populations and Specific Interventions

PubMed
4/6/2021
(insurance[Title/abstract] OR “health plan”[Title/abstract] OR “health plans”[Title/abstract] OR Healthcare[Title/abstract] OR “health care”[Title/abstract] OR “mental health” [Title/abstract])
AND
(transition*[Title/abstract] OR transition to adult care[MeSH Terms] OR “child to adult”[Title/abstract])
AND

PsycINFO
Phrase searching
4/6/2021
TI (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”) OR AB(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
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AND
TI(“foster care” OR foster child* OR foster youth* OR “aging out”) OR AB(“foster care” OR foster child* OR foster youth* OR “aging out”) OR DE “Foster Care” OR DE “Foster Children”

Web of Science
4/6/2021
Indexes=SCI-EXPANDED, SSCI, A&HCI, BKCI-S, BKCI-SSH
Article, Review, Book Chapter, Early Access
TS=(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
TS=(transition* OR “child to adult”)
AND
TS=(“foster care” OR foster child* OR foster youth* OR “aging out”)

PubMed
4/6/2021
AND
transition*[Title/abstract]
AND

PsycINFO
phrase searching
Journals; Dissertations
4/6/2021
TI(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”) OR AB (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
TI(transition*) OR AB(transition*)
AND
TI(“health literacy” OR “health coaching” OR “health coach” OR “health coaches” OR coordination OR coordinator* OR navigation OR navigator* OR “case management” OR “case manager” OR “case managers” OR “Medicaid”) OR AB(“health literacy” OR “health coaching” OR “health coach” OR “health coaches” OR coordination OR coordinator* OR navigation OR navigator* OR “case management” OR “case manager” OR “case managers” OR “Medicaid”)

Web of Science
4/6/2021
TS=(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
TS=(transition*)
AND
TS= (“health literacy” OR “health coaching” OR “health coach” OR “health coaches” OR coordination OR coordinator* OR navigation OR navigator* OR “case management” OR “case manager” OR “case managers” OR “Medicaid”)

PubMed
4/6/2021
(insurance[Title/abstract] OR “health plan”[Title/abstract] OR “health plans”[Title/abstract] OR Healthcare[Title/abstract] OR “health care”[Title/abstract] OR “mental health” [Title/abstract])
AND
transition*[Title/abstract]
AND
PsycINFO
4/6/2021
phrase searching
Journals; Dissertations
TI (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”) OR AB (insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
TI(transition*) OR AB(transition*)
AND
TI(Prisoner* OR inmate* OR incarcerated OR incarceration OR jail*) OR AB(Prisoner* OR inmate* OR incarcerated OR incarceration OR jail*)

Web of Science
4/6/2021
TS=(insurance OR “health plan” OR “health plans” OR Healthcare OR “health care” OR “mental health”)
AND
TS=(transition*)
AND
TS= (Prisoner* OR inmate* OR incarcerated OR incarceration OR jail*)
Appendix B. Evidence Table

### Table B.1. Evidence

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Study Characteristics</th>
<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binswanger et al., 2015</td>
<td>Sample size:</td>
<td>Mental illness:</td>
<td>Inclusion criteria: Release from a sentence for a drug offense or meeting at least 3 criteria for drug abuse/dependence in the year before their time in prison; recruited between 1 and 15 days after release</td>
<td>Intervention: Service, care coordination</td>
<td>Summary</td>
</tr>
<tr>
<td></td>
<td>Total: 40, INT: 20, COMP: 20</td>
<td>Substance abuse</td>
<td></td>
<td>Patient navigation for 3 months; communicated 1/week in person and/or through texting/phone calls; assessed the self-reported needs of participants; assisted with coordination of medication and appointments; provided social support and health education; facilitated enrollment in an indigent care discount program</td>
<td>Health Results: No significant difference was observed between groups regarding mean days of poor mental health, mean days of poor physical health, or the number of patients reporting at least one health risk behavior.</td>
</tr>
<tr>
<td>Geographic region: U.S.</td>
<td>Power calculation:</td>
<td>Diagnosis data source:</td>
<td>Exclusion criteria: Non-English speaking; plan to leave area within 6 months; no phone number or address for contact; children under 18; in a locked halfway house; on “current inmate status”; pending jail time in the next 6 months; having serious mental illness</td>
<td>Comparator: Other discount care program</td>
<td>Health Care Results: No significant difference was observed between groups of participants who reported receiving medical care, having a primary care provider, hospitalization, emergency department/urgent care use, or in health care coverage.</td>
</tr>
<tr>
<td>Funding source: Government Not-for-profit</td>
<td>No power calculation</td>
<td>History: sentence for drug offense; at least 3 criteria for drug use or dependence in the year prior to prison admission (criteria NR)</td>
<td></td>
<td></td>
<td>Patient Experience Results: Fewer patients in the intervention group reported any barriers to health care (INT: 7/10, COMP: 11/11, p &lt; 0.10) and barriers to substance abuse care (INT: 7/10, COMP: 11/11, p &lt; 0.10).</td>
</tr>
<tr>
<td>Study design: Randomized by individual</td>
<td></td>
<td>Self-report: drug use (Addiction Severity Index-Lite)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Age M(SD): total: 42.4 (9.1), INT: 41.6 (9.0), COMP: 43.2 (9.3); percentage female: 18%, INT: 20%, COMP: 15%</td>
<td></td>
<td></td>
<td>Health Outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participant subgroup: Prisoners</td>
<td></td>
<td></td>
<td>Days mental health not good in the last 30 days: postintervention mean (SD), intervention group: 6.7 (10.1); postcomparator mean (SD), comparison group: 13.6 (13.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Days physical health not good in the past 30 days: postintervention mean (SD), intervention group: 6 (9.5); postcomparator mean (SD), comparison group: 14.5 (13.1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Health risk behaviors reported by participants: postintervention count, intervention group: 7; postintervention count, comparison group: 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Health Care Outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Receiving care for a medical condition: postintervention count, intervention group: 3; postintervention count, comparison group: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Follow-up: 3 months</td>
</tr>
</tbody>
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46
<table>
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<tr>
<th>Study ID</th>
<th>Study Characteristics</th>
<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gilmer et al., 2012a</td>
<td>Sample size: Total: 2,505. INT: 931, COMP: 1,574</td>
<td>Mental Illness: Schizophrenia (15%), bipolar disorder (18%), major depressive disorder (29%), other psychotic disorder (7%), other depression/adjustment disorder (18%), anxiety disorder (12%), comorbid substance use disorder (30%); INT: schizophrenia (17%), bipolar disorder (18%), major depressive disorder (30%), other psychotic disorder (6%), other depression/adjustment disorder (16%), anxiety disorder (13%), comorbid substance use disorder (31%); COMP: schizophrenia (14%), bipolar disorder (18%), major depressive disorder (30%), other psychotic disorder (7%), other depression/adjustment disorder (19%), anxiety disorder (12%), comorbid substance use disorder (29%)</td>
<td>Inclusion criteria: Must be 18–24 years old, in San Diego Mental Health Services management information system, and have started treatment with either program between 10/1/06 and 07/01/09 or was in adult program prior to 10/2006 but later engaged in treatment at a youth-specific program</td>
<td>Intervention: Coaching, service, care coordination Programs collaborating with agencies within the system of care and welfare services to assist with patients’ transition into the adult system; focusing on independent-living and age-appropriate social skills, including educational and vocational services (e.g., accompanying youth to community college/potential job site); youths with mental illness who have been trained as peer specialists provide mobile outreach to youths</td>
<td>Health Care Results: After adjusting for age, gender, race/ethnicity, clinical diagnosis, comorbid substance use disorder, and Medicaid coverage, there was no significant differences between the two arms in change in emergency service visits or inpatient admissions, but intervention participants had a mean increase of 12 or more outpatient visits after enrollment than the comparator (SE: 0.92, p &lt; 0.001).</td>
</tr>
<tr>
<td>Study ID</td>
<td>Study Characteristics</td>
<td>Patient Characteristics</td>
<td>Inclusion/Exclusion Criteria</td>
<td>Intervention/Comparators</td>
<td>Results</td>
</tr>
<tr>
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<tr>
<td>Gorter et al., 2015</td>
<td>Sample size: Total/pretransfer: 50, total/posttransfer: 36</td>
<td>Mental illness: Exact diagnoses and numbers NR; other chronic condition in total/pretransfer sample: 62%; posttransfer: 61%; other chronic conditions included anorexia</td>
<td>Inclusion criteria: Youth with chronic health conditions and/or disabilities who are expected to transfer to adult care within one year</td>
<td>Intervention: Coaching, service Receive a “Youth KIT” binder with info to promote organization, goal setting, and self-management in several domains including medical and health information; access to TRACE, an anonymous online transition mentor (occupational therapist with expertise in transition) who gave individual and group sessions</td>
<td>Summary Patient Experience Results: No significant difference was observed between posttransfer and pretransfer in helpfulness of TRACE mentor or Youth KIT effectiveness in taking charge of own health care, developing relationships with health care workers, communicating about health care, or setting and working toward goals. Relevance, understandability, and usability scores of Youth KIT and online mentor also did not significantly change. However, there was a significant increase in health care–related transition goal achievement performance rating (post: 6.5, pre: 4.3; ( p &lt; 0.001 )) and goal satisfaction rating (post: 6.4, pre: 4.3; ( p &lt; 0.001 )).</td>
</tr>
</tbody>
</table>

**Intervention Use/Uptake Results:** No significant change in use of medical/health information section of Youth KIT or logging into TRACE website before/after transfer.

**Patient Experience Outcomes**

Mean helpfulness score of mentor in taking charge of own health care (higher score = more helpful): postintervention mean (SD), intervention group: 1.9 (2.5); postcomparator mean (SD), comparison group: 2.8 (2.7)

Health care–related transition goal achievement satisfaction rating (higher score = higher satisfaction): postintervention mean (SD), intervention group: 6.4 (2.6); postcomparator mean (SD), comparison group: 4.3 (2.5)
<table>
<thead>
<tr>
<th>Study ID</th>
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<tbody>
<tr>
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<td></td>
<td>Mean helpfulness score of Youth KIT for developing supportive and respectful relationships with health care workers (higher score = more helpful): postintervention mean (SD), intervention group: 2.1 (2.3); postcomparator mean (SD), comparison group: 2.7 (2.6)</td>
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<td>Mean helpfulness score of mentor in developing supportive and respectful relationships with health care workers (higher score = more helpful): postintervention mean (SD), intervention group: 2.2 (2.7); postcomparator mean (SD), comparison group: 2.2 (2.6)</td>
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<td>Mean helpfulness score of Youth KIT in developing supportive and respectful relationships with health care workers (higher score = more helpful): postintervention mean (SD), intervention group: 2.4 (2.5); postcomparator mean (SD), comparison group: 3.1 (2.5)</td>
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<td>Mean helpfulness score of mentor in developing supportive and respectful relationships with health care workers (higher score = more helpful): postintervention mean (SD), intervention group: 1.9 (2.5); postcomparator mean (SD), comparison group: 2.9 (2.8)</td>
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<td>Mean helpfulness score of Youth KIT in taking charge of own health care (higher score = more helpful): postintervention mean (SD), intervention group: 2.5 (2.5); postcomparator mean (SD), comparison group: 3.5 (2.5)</td>
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<td>Mean helpfulness score of Youth KIT in setting and working toward goals (higher score = more helpful): postintervention mean (SD), intervention group: 2.9 (2.8); postcomparator mean (SD), comparison group: 4.2 (2.3)</td>
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<td></td>
<td>Mean helpfulness score of mentor in setting and working toward goals (higher score = more helpful): postintervention mean (SD), intervention group: 2.4 (2.8); postcomparator mean (SD), comparison group: 3.5 (2.8)</td>
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<td></td>
<td>Mean relevance score of Youth KIT (higher score = more relevant): postintervention mean (SD), intervention group: 3.9 (1.8); postcomparator mean (SD), comparison group: 4.2 (2.1)</td>
</tr>
<tr>
<td>Study ID</td>
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<tr>
<td>Harris et al., 2020</td>
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<td>Mean relevance score of the online mentor (higher score = more relevant): postintervention mean (SD), intervention group: 3.5 (2.2); postcomparator mean (SD), comparison group: 4.1 (2.7)</td>
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<td>Mean organization score of Youth KIT (higher score = more organized): postintervention mean (SD), intervention group: 5.3 (2.3); postcomparator mean (SD), comparison group: 5.8 (1.6)</td>
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<td>Mean understandability score of the online mentor (higher score = easier to understand): postintervention mean (SD), intervention group: 4.4 (2.5); postcomparator mean (SD), comparison group: 4.5 (2.6)</td>
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<td></td>
<td>Mean understandability score of Youth KIT (higher score = easier to understand): postintervention mean (SD), intervention group: 5.5 (2.2); postcomparator mean (SD), comparison group: 5.6 (1.8)</td>
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<td>Mean usability score of online mentor (higher score = easier to use): postintervention mean (SD), intervention group: 4.2 (2.4); postcomparator mean (SD), comparison group: 4.2 (2.7)</td>
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<td></td>
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<td></td>
<td>Mean usability score of Youth KIT (higher score = easier to use): postintervention mean (SD), intervention group: 5.3 (3.3); postcomparator mean (SD), comparison group: 5.8 (1.9)</td>
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<td>Use/Uptake of Intervention Outcomes Number of participants who used the Youth KIT pretransfer and posttransfer—medical and health information section: postintervention count, intervention group: 19; postintervention count, comparison group: 15</td>
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<td>Logging in to TRACE website at least once: postintervention count, intervention group: 19; postintervention count, comparison group: 41</td>
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<td>Summary Intervention Use/Uptake Results: Of the 449 adolescent well visits, the transition checklist was documented as being used in 199 visits.</td>
</tr>
</tbody>
</table>

- **Geographic region:** U.S.
- **Sample size:** 251
- **Power calculation:** No power calculation
- **Mental illness:** Autism spectrum disorder
- **Diagnosis data source:** Hospital records
- **Inclusion criteria:** Diagnosis of autism spectrum disorder, age >12 years
- **Exclusion criteria:** NR
- **Intervention:** Service, care coordination, Transition Reference Sheet, Transition Checklist/Template
<table>
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<tr>
<td>Funding source: Government</td>
<td></td>
<td>Age/gender: 25% Latino; 58% black, multiracial or other, 42% white; avg. age: 17 (range: 14–21)</td>
<td>Inclusion criteria: Correctional inmates in Massachusetts whose Axis I major mental illness resulted in functional impairment for one year or longer</td>
<td>Comparator: Cross-Sectional NR Follow-up: N/A</td>
<td>Use/Uptake of Intervention Outcomes Use of transition checklist/template (visits, not patients): Postintervention count, intervention group: 199; Preintervention count, intervention group: NR</td>
</tr>
<tr>
<td>Study design: Cross-sectional analysis</td>
<td>Patient subgroup: Children in transition</td>
<td>Inclusion criteria: Correctional inmates in Massachusetts whose Axis I major mental illness resulted in functional impairment for one year or longer</td>
<td>Comparator: Cross-Sectional NR Follow-up: N/A</td>
<td>Use/Uptake of Intervention Outcomes Use of transition checklist/template (visits, not patients): Postintervention count, intervention group: 199; Preintervention count, intervention group: NR</td>
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</tr>
<tr>
<td>Hartwell, Fisher, and Deng, 2009</td>
<td>Sample size: Total: 957, measured in episodes, not by individuals</td>
<td>Mental illness: Thought disorders (53%), mood disorders (40%), personality disorders (6%), cooccurring substance abuse (63%)</td>
<td>Inclusion criteria: Correctional inmates in Massachusetts whose Axis I major mental illness resulted in functional impairment for one year or longer</td>
<td>Comparator: Cross-Sectional NR Follow-up: N/A</td>
<td>Use/Uptake of Intervention Outcomes Use of transition checklist/template (visits, not patients): Postintervention count, intervention group: 199; Preintervention count, intervention group: NR</td>
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<tr>
<td>Geographic region: U.S.</td>
<td>Power calculation: No power calculation</td>
<td>Diagnosis data source: NR</td>
<td>Exclusion criteria: NR</td>
<td>Comparator: Cross-Sectional NR Follow-up: N/A</td>
<td>Use/Uptake of Intervention Outcomes Use of transition checklist/template (visits, not patients): Postintervention count, intervention group: 199; Preintervention count, intervention group: NR</td>
</tr>
<tr>
<td>Funding source: NR</td>
<td>Study design: Retrospective cohort</td>
<td>Age/gender: Age M(SD): total: NR, INT: NR, COMP: NR; percentage female: 22%, INT: NR, COMP: NR</td>
<td>Intervention: Service Regionalization of Massachusetts Department of Mental Health's forensic transition team; providing transition planning services to incarcerated individuals; identifying service needs and starting benefits process 3 months before release; continuing to support and monitor individuals 3 months postrelease; teams converted from a centralized to a regionalized organization in order to better serve heterogenous communities</td>
<td>Comparator: Treatment as usual Preregionalization of forensic transition team Follow-up: 3 months</td>
<td>Summary Health Care Results: No significant difference was observed between the two groups in number of hospitalized clients, but there was a significantly increased odds of clients engaging in health care treatment postregionalization (OR: 1.6, 95% CI: 1.2–2.0).</td>
</tr>
<tr>
<td>Sample size: Total: 5,476, preintervention: 2,902, postintervention: 529</td>
<td>Participant subgroup: Prisoners</td>
<td>Mental illness: Depression, anxiety, PTSD</td>
<td>Inclusion criteria: Ambulatory, nonincarcerated, nonhospitalized separating marines preparing to discharge from service and were participating in a mandatory preseparation workshop</td>
<td>Comparator: Treatment as usual Preregionalization of forensic transition team Follow-up: 3 months</td>
<td>Summary Health Care Results: No significant difference was observed between the two groups in number of hospitalized clients, but there was a significantly increased odds of clients engaging in health care treatment postregionalization (OR: 1.6, 95% CI: 1.2–2.0).</td>
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<tr>
<td>Hourani et al., 2012</td>
<td>Power calculation: No power calculation</td>
<td>Diagnosis data source: Self-report: depression (Center for Epidemiological Studies-Depression); anxiety (Patient Health Questionnaire-7); PTSD (PTSD Checklist-Civilian)</td>
<td>Exclusion criteria: NR</td>
<td>Comparator: Treatment as usual Preregionalization of forensic transition team Follow-up: 3 months</td>
<td>Summary Health Care Results: No significant difference was observed between the two groups in number of hospitalized clients, but there was a significantly increased odds of clients engaging in health care treatment postregionalization (OR: 1.6, 95% CI: 1.2–2.0).</td>
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<td>Geographic region: U.S.</td>
<td>Author conflict of interest: Last author associated with funder</td>
<td>Mental illness: Depression, anxiety, PTSD</td>
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<tr>
<td>Jarrett et al., 2012</td>
<td>Study design: Prospective cohort</td>
<td>Age/gender: Age M(SD): total: NR, pre: NR, post: NR; percentage female: NR, INT: NR, COMP: NR</td>
<td>Inclusion criteria: Severe mental illness; due for imminent release to catchment areas of local mental health trusts</td>
<td>Intervention: Service, care coordination CTI manager providing practical help to identify three priority problems with which client needed help and which could act as a barrier to engaging with mental health services upon release; CTI manager providing practical help to address the issues before and after release (e.g., filling out forms or searching for housing); after release CTI manager continuing to support client to ensure effective transfer (e.g., accompanying to Community Mental Health Team appointment)</td>
<td>Summary Health Care Results: No significant difference was observed in contact with mental health service, contact with alcohol/substance abuse services, receiving benefits, or receiving medication. There was a significant difference in registering with general practitioner (OR: 10.8, 95% CI: 1.4–85.4).</td>
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<tr>
<td></td>
<td>Geographic region: U.K.</td>
<td>Power calculation: Insufficient power</td>
<td>Exclusion criteria: No severe mental illness (e.g., personality disorder or substance abuse); set to be released to boroughs or areas outside of catchment; were serving long sentences</td>
<td>Comparator: Treatment as usual Received care from prison in-reach team (includes discharge planning arrangement)</td>
<td>Health Care Outcomes Contact with mental health services: postintervention count, intervention group: 9; postintervention count, comparison group: 3 Registered with a general practitioner: postintervention count, intervention group: 13; postintervention count, comparison group: 3</td>
</tr>
<tr>
<td></td>
<td>Funding source: Government</td>
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<td>Receiving medication: postintervention count, intervention group: 12; postintervention count, comparison group: 3</td>
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<tr>
<td></td>
<td>Study design: Randomized by individual</td>
<td>Sample size: Total: 60, INT: 32, COMP: 28</td>
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<td>Contact with mental health and/or substance abuse services: postintervention count, intervention group: 4; postintervention count, comparison group: 11</td>
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<td>Follow-up: 1–1.5 months</td>
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<tr>
<td>Kidd et al., 2019</td>
<td>Geographic region: Canada</td>
<td>Funding source: Government</td>
<td>Sample size: Total/preintervention: 31, total/postintervention: 28</td>
<td>Inclusion criteria: Formerly homeless individuals aged 18–26 who had obtained secure housing between 1 day and 12 months before recruitment</td>
<td>Summary</td>
</tr>
<tr>
<td></td>
<td>Study design: Prospective cohort</td>
<td>Power calculation: Unclear</td>
<td>Mental illness: NR</td>
<td>Intervention: Coaching, service</td>
<td>Health Results: No significant change was observed in any measurements, including summary QOL, psychological QOL, physical QOL, self-reported QOL, self-reported health, mental health symptoms, resilience.</td>
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<td>Diagnosis data source: Self-report: mental health (Mental Health Continuum—Short Form), QOL (WHO QOL Scale), resilience (Connor-Davidson resilience scale)</td>
<td>Case management: access to a transition-focused case worker who gave general support and encouragement to assist in navigating relevant systems (1/week phone call, regular contact via text/email); mental health support: access to weekly, 90-min. group mental health services and individual psychotherapy tailored to client need; peer support: formerly homeless with successful transition, texts/calls/one-on-one meetings with participants, weekly drop-in workshops for activities</td>
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<td>Inclusion criteria: NR</td>
<td>Comparator: Pretest/postest Preintervention Follow-up: 6 months</td>
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<td>Exclusion criteria: NR</td>
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<td>Intervention Use/Uptake Results: Intervention use was measured in the intervention group, but not in the comparison group.</td>
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<td>Adverse Events Results: Adverse events were observed in the intervention group, but not in the comparison group.</td>
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<td>Health Outcomes</td>
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<td>WHO QOL survey in psychological health: postintervention mean (SD), intervention group: 19.19 (5.43); postcomparator mean (SD), comparison group: 19.12 (5.16)</td>
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<td>WHO QOL survey in self-reported QOL: postintervention mean (SD), intervention group: 3.5 (1.07); postcomparator mean (SD), comparison group: 3.36 (1.1)</td>
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<td>WHO QOL survey in physical health: postintervention mean (SD), intervention group: 24.38 (4.74); postcomparator mean (SD), comparison group: 24.38 (4.82)</td>
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<td>WHO QOL survey summary scores: postintervention mean (SD), intervention group: 3.38 (0.65); postcomparator mean (SD), comparison group: 3.39 (0.6)</td>
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<td>WHO QOL survey in self-reported health: postintervention mean (SD), intervention group: 3.04 (1.26); postcomparator mean (SD), comparison group: 3.04 (0.98)</td>
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<td>Mental health continuum short-form scores: postintervention mean (SD), intervention group: 2.97 (0.92); postcomparator mean (SD), comparison group: 2.79 (0.91)</td>
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<td></td>
<td>Connor-Davidson resilience scale scores: postintervention mean (SD), intervention group: 2.6 (0.84); postcomparator mean (SD), comparison group: 2.68 (0.78)</td>
</tr>
<tr>
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<tr>
<td>Kinner et al., 2016;</td>
<td>Sample size: Total:</td>
<td>Mental illness:</td>
<td>Inclusion criteria: Adult</td>
<td>Intervention:</td>
<td>Use/Uptake of Intervention Outcomes</td>
</tr>
<tr>
<td>Cheng et al., 2018;</td>
<td>1,325, INT: 665,</td>
<td>Lifetime mental illness</td>
<td>prisoners in one of seven</td>
<td>Coaching, service</td>
<td>Mean score of engagement with peer support (higher score = more</td>
</tr>
<tr>
<td>Young et al., 2015;</td>
<td>COMP: 660</td>
<td>diagnosis (43%), INT:</td>
<td>included Queensland</td>
<td>Tailored &quot;Passport&quot; at</td>
<td>engagement): postintervention mean (SD), intervention group: 1.54</td>
</tr>
<tr>
<td>Kinner et al., 2014;</td>
<td>Power calculation:</td>
<td>lifetime mental illness</td>
<td>correctional centers who</td>
<td>time of release with</td>
<td>(0.96); postcomparator mean (SD), comparison group: N/A</td>
</tr>
<tr>
<td>Kinner et al., 2013</td>
<td>Sufficient power</td>
<td>diagnosis (45%), COMP:</td>
<td>were expected to be</td>
<td>reentry guide (summary</td>
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<tr>
<td>Geographic region:</td>
<td></td>
<td>lifetime mental illness</td>
<td>released within the next</td>
<td>of health status and</td>
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<tr>
<td>Australia</td>
<td></td>
<td>diagnosis (42%)</td>
<td>6 weeks, judged to be safe</td>
<td>treatment needs along</td>
<td></td>
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<tr>
<td>Funding source:</td>
<td></td>
<td></td>
<td>to approach, and could</td>
<td>with a list of relevant</td>
<td></td>
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<tr>
<td>Government</td>
<td></td>
<td></td>
<td>provide informed, written</td>
<td>community services);</td>
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<tr>
<td>Study design:</td>
<td></td>
<td></td>
<td>consent</td>
<td>contacted via phone up</td>
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<td>Randomized by</td>
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<td>to 4 times in first 28</td>
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<td>individual</td>
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<td>days after release</td>
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<td>approximately 1/week;</td>
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<td>phone calls focusing on</td>
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<td>identifying services</td>
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<td>based on needs</td>
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<td>Comparator:</td>
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<td>Treatment as usual</td>
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<td>Could include transitional</td>
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<td>support provided by</td>
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<td>Queensland Corrective</td>
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<td>Services along with a</td>
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<td>brief summary of health</td>
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<td>status gleaned from</td>
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<td>baseline interview</td>
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<td>Follow-up: 1 month</td>
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<td>Lemke et al., 2018</td>
<td>Sample size: Total:</td>
<td>Mental illness:</td>
<td>Inclusion criteria:</td>
<td>Intervention:</td>
<td>Summary</td>
</tr>
<tr>
<td>Geographic region:</td>
<td>209, INT: 105,</td>
<td>Conditions categorized as</td>
<td>Adolescents aged 16–22,</td>
<td>Service, care coordination</td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td>COMP: 104</td>
<td>low (include mild anxiety/</td>
<td>insured by a single</td>
<td>Assigned health care</td>
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<tr>
<td>Funding source:</td>
<td></td>
<td>depression, ADHD, learning</td>
<td>Medicaid-managed care</td>
<td>transition nurse who</td>
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</tr>
<tr>
<td>Government</td>
<td></td>
<td>disability, high-functioning</td>
<td>organization for SSI</td>
<td>coordinated services such</td>
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</tr>
<tr>
<td>Study design:</td>
<td></td>
<td>autism); medium (include</td>
<td>eligible youth with chronic</td>
<td>as: (1) an in-person review</td>
<td></td>
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<tr>
<td>Randomized by</td>
<td></td>
<td>moderate autism); and high</td>
<td>conditions</td>
<td>of readiness assessment</td>
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<tr>
<td>individual</td>
<td></td>
<td>complexity (severe</td>
<td></td>
<td>with the study participant</td>
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<td></td>
<td></td>
<td>intellectual/physical</td>
<td></td>
<td>and/or caregiver (2) a</td>
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<td>disabilities, rely on</td>
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<td>status assessment of</td>
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<td>others for most or all</td>
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<td>transition planning and</td>
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<td>care)</td>
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<td>preparation, and (3)</td>
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<td>monthly phone calls</td>
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<td>Patient Experience Results: No significant difference in</td>
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<td>satisfaction with care,</td>
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<td>of care, perceived quality</td>
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<td>discussions on transition</td>
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<td>with a general practitioner (95% CI: 1.2–2.1, ( p = 0.01 )).</td>
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<td>Health Care Outcomes: No</td>
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<td>mental health service</td>
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<td>contact or substance</td>
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<td>abuse service contact</td>
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<td>was observed, but</td>
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<td>intervention group was</td>
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<td>1.6 times as likely to</td>
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<td>Follow-up: 1 month</td>
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<td>Service, care coordination</td>
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<td>Assigned health care</td>
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<td>transition nurse who</td>
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<td>coordinated services such</td>
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<td>as: (1) an in-person review</td>
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<td>of readiness assessment</td>
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<td>transition planning and</td>
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<td>monthly phone calls</td>
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<td>Participation subgroup:</td>
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<td>Prisoners</td>
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<td>Follow-up: 1 month</td>
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<tr>
<th>Study ID</th>
<th>Study Characteristics</th>
<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
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<tr>
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<td>with the participant and/or caregiver to update on the transition action plan; also received enhanced usual care (notebook on clinic’s transition policy, transition readiness assessment form, list of referrals, info on insurance, guardianship, and advance directives). Comparator: Treatment as usual Enhanced usual care only (notebook on clinic’s transition policy, transition readiness assessment form, list of referrals, info on insurance, guardianship, and advance directives)</td>
<td>activation score (INT: 3.9, COMP: 3.0, p = 0.01). On the Client Perceptions of Coordination Questionnaire, the intervention group had 0.48 odds of responding “mostly” or “always” on how frequently they were confused on the roles their providers serve (95% CI: 0.25–0.94, p = 0.03) and 0.35 odds of saying “mostly” or “always” on frequency of receiving conflicting advice from providers (95% CI: 0.17–0.70, p &lt; 0.01).</td>
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**Study ID**

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<tr>
<th>Study Characteristics</th>
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<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
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<td></td>
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<td>with the participant and/or caregiver to update on the transition action plan; also received enhanced usual care (notebook on clinic’s transition policy, transition readiness assessment form, list of referrals, info on insurance, guardianship, and advance directives). Comparator: Treatment as usual Enhanced usual care only (notebook on clinic’s transition policy, transition readiness assessment form, list of referrals, info on insurance, guardianship, and advance directives)</td>
<td>activation score (INT: 3.9, COMP: 3.0, p = 0.01). On the Client Perceptions of Coordination Questionnaire, the intervention group had 0.48 odds of responding “mostly” or “always” on how frequently they were confused on the roles their providers serve (95% CI: 0.25–0.94, p = 0.03) and 0.35 odds of saying “mostly” or “always” on frequency of receiving conflicting advice from providers (95% CI: 0.17–0.70, p &lt; 0.01).</td>
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**Patient Experience Outcomes**

- Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “Overall, how satisfied are you with the care you have received in the past 3 months?” at 6 and 12 months: postintervention count, intervention group: 95.55; postintervention count, comparison group: 85.55
- Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “How often did you get the services you thought you needed?” at 6 months: postintervention count, intervention group: 78.75; postintervention count, comparison group: 84.24
- PACIC unadjusted patient activation score at 6 months: postintervention mean (SD), intervention group: 3.9 (95% CI 3.4–4.2); postcomparator mean (SD), comparison group: 3 (95% CI 2.6–3.5)
- PACIC unadjusted total score at 6 months: postintervention mean (SD), intervention group: 3.8 (95% CI 3.4–4.2); postcomparator mean (SD), comparison group: 2.9 (95% CI 2.5–3.4)
- Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “In the past 3 months, how often did you feel the care you received was well coordinated?” at 6 and 12 months: postintervention count, intervention group: 85.05; postintervention count, comparison group: 81.12
- Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “How often were you happy with the quality of care you received?” at 6 and 12 months: postintervention count, intervention group: 92.4; postintervention count, comparison group: 82.16 |
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<tr>
<th>Study ID</th>
<th>Study Characteristics</th>
<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
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</table>

Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “How often were you confused about the roles of different services providers?” at 6 and 12 months: postintervention count, intervention group: 12.6; postintervention count, comparison group: 21.84

Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “How often did you seem to get conflicting advice from service providers?” at 6 months: postintervention count, intervention group: 17.85; postintervention count, comparison group: 38.48

Client perceptions of Coordination Questionnaire, “mostly” or “always” responses (#) for “How often does your GP talk with you about your future care?”: postintervention count, intervention group: 58.8; postintervention count, comparison group: 54.08

PACIC unadjusted mean score for delivery system design and/or decision support at 6 months: postintervention mean (SD), intervention group: 3.9 (95% CI 3.7–4.1); postcomparator mean (SD), comparison group: 3.7 (95% CI 3.5–3.9)

PACIC unadjusted mean score for goal-setting at 6 months: postintervention mean (SD), intervention group: 3.4 (95% CI 3.1–3.6); postcomparator mean (SD), comparison group: 3.1 (95% CI 3.0–3.3)

PACIC unadjusted mean score for problem-solving at 6 months: postintervention mean (SD), intervention group: 3.5 (95% CI 3.2–3.8); postcomparator mean (SD), comparison group: 3.2 (95% CI 3.0–3.5)

PACIC unadjusted mean score for coordination and/or follow-up at 6 months: postintervention mean (SD), intervention group: 2.9 (95% CI 2.6–3.2); postcomparator mean (SD), comparison group: 2.5 (95% CI 2.3–2.7)
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<th>Study ID</th>
<th>Study Characteristics</th>
<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>MacInnes et al., 2021</td>
<td>Sample size: 62</td>
<td>Mental illness: Mood disorder 14, schizophrenia 9, personality disorder 6, other 2 (intervention group, n = 31); mood disorder 16, schizophrenia 7, personality disorder 3, other 4 (comparison group, n = 31)</td>
<td>Inclusion criteria: “The participants were male prisoners, aged 18 and over, residing in six prisons in Kent and London and referred to the RESET service. Prisoners were eligible for the service (RESET intervention) if they had mental health needs, no current release plan, were being released to specific catchment areas in South London or South East England and were capable of giving informed consent.”</td>
<td>Intervention: Coaching, care coordination “The RESETtle in the community (RESET) intervention aimed to enable prisoners to prepare for release, linking health care and statutory resettlement providers for a smooth and coordinated transition into the community. It focused on building rapport, developing motivation, and engaging with statutory services. The RESET team offered to meet the prisoner on the day of release and escort them to appointments such as probation and housing. The team ensured correct medication, prescriptions and planned appointments for the first few days. Support continued for 12 weeks to help the participant obtain accommodation, to access welfare benefits, to engage with health services and strengthen links with family and community support services. The RESET teams worked with statutory agencies to provide holistic support.” Comparator: Treatment as usual “Standard care was provided by community rehabilitation companies, private companies contracted by the Support government to manage and deliver a resettlement service for most offenders released from custody.”</td>
<td>Summary</td>
</tr>
<tr>
<td></td>
<td>Geographic region: U.K.</td>
<td>Diagnosis data source: Prison InReach case notes</td>
<td>Exclusion criteria: N/A</td>
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<td>Health Care Outcomes</td>
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<tr>
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<td>Funding source: Government</td>
<td>Age/gender: Age M(SD): Total: 36.2 (10.3), Int: 37.9 (11.0), COMP: 34.4 (9.4); percentage female: Total: 0%, Int: 0%, COMP: 0%</td>
<td></td>
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<td>Contact with GP: Postintervention count, intervention group: 27; Postintervention count, comparison group: 11</td>
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<td>Study design: Prospective cohort</td>
<td>Participant subgroup: Prisoners</td>
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<td>Participants in the hospital: Postintervention count, intervention group: 0; Postintervention count, comparison group: 2</td>
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<td>Days in the hospital: Postintervention mean (SD), intervention group: 2 (7.48); Postcomparator mean (SD), comparison group: 19.71 (70.5)</td>
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<td>Use/Uptake of Intervention Outcomes</td>
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<td>Study ID</td>
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<tr>
<td>McKenna et al., 2015</td>
<td>Sample size: Total: 278, INT: 170, COMP: 108</td>
<td>Mental illness: Schizophrenia (54%), depression (11%), bipolar disorder (10%), head injury (3%), anxiety disorder (2%), other (6%), comorbid substance use disorder (44%), personality disorder (18%)</td>
<td>Inclusion criteria: All current and all newly referred prisoners set to be released within 3 months from four prisons included in study</td>
<td>Intervention: Coaching, service, care coordination Assertive Community Treatment informed Prison In-Reach Model of Care: screening, referral, assessment, treatment, and release planning, which involves communication with community mental health services and social care agencies for reintegration during 3 months before prisoner release</td>
<td>Summary: Health Care Results: No significant difference was observed in general mental health service contacts, alcohol/drug services, or having a written release plan. There was a significant difference in face-to-face contact with community mental health services (OR: 1.9, 95% CI 1.1–3.1). Health Care Outcomes General mental health service contacts: postintervention count, intervention group: 94; postintervention count, comparison group: 52 Face-to-face contact with community mental health services: postintervention count, intervention group: 88; postintervention count, comparison group: 43 Have a written release plan: postintervention count, intervention group: 138; postintervention count, comparison group: 83</td>
</tr>
</tbody>
</table>

### Studies Characteristics

- **Geographic region**: New Zealand
- **Power calculation**: No power calculation
- **Funding source**: Government
- **Study design**: Retrospective cohort

### Patient Characteristics

- **Mental illness**: Schizophrenia (54%), depression (11%), bipolar disorder (10%), head injury (3%), anxiety disorder (2%), other (6%), comorbid substance use disorder (44%), personality disorder (18%)
- **Diagnosis data source**: Electronic prisoner management systems
- **Age/gender**: Age M(SD): total: NR, INT: NR, COMP: NR; percentage female: 24%, INT: 19%, COMP: 33%
- **Participant subgroup**: Prisoners

### Inclusion/Exclusion Criteria

- **Inclusion criteria**: All current and all newly referred prisoners set to be released within 3 months from four prisons included in study
- **Exclusion criteria**: NR

### Intervention/Comparators

- **Intervention**: Coaching, service, care coordination
- **Comparator**: Treatment as usual

### Results

- Follow-up: 2 weeks, 3 months, 9 months postrelease

- **Summary**
  - General mental health service contacts: postintervention count, intervention group: 94; postintervention count, comparison group: 52
  - Face-to-face contact with community mental health services: postintervention count, intervention group: 88; postintervention count, comparison group: 43
  - Have a written release plan: postintervention count, intervention group: 138; postintervention count, comparison group: 83
<table>
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<th>Study ID</th>
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<th>Patient Characteristics</th>
<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
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<tbody>
<tr>
<td>Moosa and Sandhu, 2015</td>
<td>Sample size: NR</td>
<td>Mental illness: ADHD</td>
<td>Adolescents diagnosed with ADHD who were at least 15 years old as of 12/31/2012 and whose referrals were still open to the Birmingham CAMHS</td>
<td>Intervention: Service, care coordination Transition planning meetings between transition team and participants; initial letter sent to participants over 16 to inform them of impending need for transfer and that their needs would be assessed prior to transfer; needs assessment focused on communication, knowledge, and empowerment; psychiatrist in team arranged clinic review appointments; transitions nurse from Children’s Mental Health Services and ADHD specialist nurse from adult team held weekly clinic at various centers. Comparator: Pretest/posttest Preintervention. Follow-up: 12 months</td>
<td>Summary: Health Care Results: Authors observed a decrease in the number of individuals over 16 in CAMHS (14 from 134), and a decrease in the number of individuals who had just turned 16 in CAMHS (47 from 113). Approximately 70 of the individuals over 16 and 25 of the individuals who had just turned 16 successfully entered AMHS. Referral rate to AMHS increased from 67% to 95%. Number of individuals who had just turned 16 in CAMHS: postintervention count, intervention group: 14; postintervention count, comparison group: 134 Number of individuals over 16 in CAMHS: postintervention count, comparison group: 113</td>
</tr>
<tr>
<td>Sheidow, McCart, and Davis, 2016</td>
<td>Sample size: Total: 80</td>
<td>Mental illness: Counts NR; major depressive disorder, dysthymic disorder, bipolar disorder, panic disorder, agoraphobia, social phobia, obsessive-compulsive disorder, PTSD, generalized anxiety disorder, schizophrenia, schizophreniform disorder, psychotic disorder not otherwise specified, and bulimia nervosa</td>
<td>Have had an arrest or release from incarceration/detention within the past 18 months; referred from justice system by case workers who suspected the patient had a serious mental illness.</td>
<td>Intervention: Coaching, care coordination Therapists with frequent contact with patient (minimum 4 hours/week) and are available 24/7; therapist coordinates care with other health care professionals and teaches these skills to patient to transition them to lead their own care; peer coaches work as “skills trainers” to mentor patients (approx 1-hour session/week); coaches deliver tailored curriculum in a wide range of domains w/3–7 sessions per domain; coaches can continue work with client for 2–4 months beyond therapist to sustain changes</td>
<td>Summary: Health Outcomes Results: Postintervention, 76% of participants reported control over their mental illness symptoms, and 58% of those substance abuse problems reported a reduction in their use of substances. Health Outcomes Lack of control of mental illness symptoms at discharge from program compared with admission: Preintervention count, intervention group: 80; Postintervention count, comparison group: 19 Reduction in frequency of substance abuse at discharge from program compared with admission: Preintervention count, intervention group: 66; Postintervention count, comparison group: 38</td>
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<tr>
<td>Study ID</td>
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<td>Inclusion/Exclusion Criteria</td>
<td>Intervention/Comparators</td>
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<tr>
<td>Tsai and Goggin, 2017</td>
<td>Sample size: Total: 87</td>
<td>Mental illness: Schizophrenia-spectrum disorder (4%), bipolar disorder (19%), major depression (17%), alcohol use disorder (30%), drug use disorder (45%), PTSD (29%), other disorder (28%)</td>
<td>Inclusion criteria: Residents of the Willard-Cybulski Correctional Institution's Veterans Service Unit Exclusion criteria: NR</td>
<td>Intervention: Coaching, service Veterans Service Unit: veteran-only prison unit; utilizes military culture and emphasizes skill-building; encourages preparing to work upon release; some veterans in unit are designated as peers to help disseminate information and help manage on-unit problems; participants also have access to health care for reentry veterans, which provides outreach and prerelease assessment services for veterans in correctional facilities Comparator: No comparator Follow-up: 5 months</td>
<td>Summary Patient Experience Results: Authors reported the percentage of responses that were “agree/strongly agree” when patients were asked whether they received help for needed mental health care (31%); needed substance abuse treatment (43%); important information for release (47%); preparing for reintegration (52%); whether skills groups were helpful (41%). Patient Experience Outcomes Number of veterans who “agree/strongly agree” that the Veterans Service Unit helped them receive needed substance abuse treatment: postintervention count, intervention group: 37; postintervention count, comparison group: N/A Number of veterans who “agree/strongly agree” that the Veterans Service Unit helped them receive important information (e.g., parole, VA services) for release: postintervention count, intervention group: 41; postintervention count, comparison group: N/A Number of veterans who “agree/strongly agree” that the Veterans Service Unit prepared them for reintegration: postintervention count, intervention group: 45; postintervention count, comparison group: N/A Number of veterans who “agree/strongly agree” that the Veterans Service Unit skills groups have been helpful: postintervention count, intervention group: 36; postintervention count, comparison group: N/A</td>
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<tr>
<td>Wang et al., 2012</td>
<td>Sample size: Total: 200, INT: 98, COMP: 102</td>
<td>Mental illness: Depression (31%), PTSD (50%), schizophrenia (6.5%); INT: depression (30%), PTSD (47%), schizophrenia (5%); COMP: depression (33%), PTSD (54%), schizophrenia (8%)</td>
<td>Inclusion criteria: Recently released prisoners in San Francisco area either having a chronic condition or being older than 50</td>
<td>Intervention: Service&lt;br&gt;Referral to Transition Clinics to be seen within 4 weeks; have continued contact with community health worker who provides case management, medical and social service navigation (e.g., accompanying patients to medical/behavioral health appointments), and chronic disease self-management support</td>
<td>Health Care Results: No significant difference was observed in primary care use or hospitalization, but authors did observe that intervention participants were 0.53 times as likely to have emergency department use (95% CI: 0.29–0.97, p = 0.04).&lt;br&gt;&lt;br&gt;Health Care Outcomes&lt;br&gt;Primary care utilization—more than 2 visits to assigned clinic: postintervention count, intervention group: 37; postintervention count, comparison group: 48&lt;br&gt;Any hospitalization at San Francisco General Hospital: postintervention count, intervention group: 10; postintervention count, comparison group: 15&lt;br&gt;Any emergency department use at San Francisco General Hospital: postintervention count, intervention group: 25; postintervention count, comparison group: 40&lt;br&gt;Follow-up: 12 months</td>
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</table>
| Wenzlow et al., 2011 | Sample size: Total: 686, INT project facility: 77, project facility before INT: 195, COMP facility during INT period: 130, COMP facility before project period: 284 | Mental illness: NR<br>Diagnosis data source: Administrative data from state’s Department of Corrections and the mental health agency for demographic and diagnostic data | Inclusion criteria: 18 or older; diagnosed with major depression, bipolar disorder, or psychotic illness and identified as needing intensive treatment but not 24-hour monitoring; released from one of the three correctional facilities included between 7/1/2007 and 3/31/2008 | Intervention: Service<br>Identify inmates with serious mental illness and help them apply for Medicaid (initially at 9 months before release, subsequently at 2 months before release) and disability benefits 4 months before release | Summary<br>Health Care Results: Compared with the comparison group facilities, project facilities significantly differed in the percentage increase of patients enrolled in Medicaid at 30 days postrelease after implementation of the discharge planning program (difference-in-difference: 15%, p = 0.04), percentage using any Medicaid mental health services at 90 days postrelease (difference-in-difference: 18%, p = 0.01), percentage using outpatient Medicaid mental health services at 90 days postrelease (difference-in-difference: 17%, p = 0.02), percentage using prescription drugs from Medicaid 90 days postrelease (difference-in-difference: 11%, p = 0.04).<br><br>Health Care Outcomes<br>Out-patient Medicaid mental health service use at 3 months postrelease: postintervention count, intervention group: 15; postintervention count, comparison group: 3
<table>
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<th>Inclusion/Exclusion Criteria</th>
<th>Intervention/Comparators</th>
<th>Results</th>
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<td></td>
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<td>29%; COMP facility during INT period: 22%, COMP facility before INT period: 6% Participant subgroup: Prisoners</td>
<td>correctional facilities during the project period; released from other Oklahoma correctional facilities before project implementation years</td>
<td>Enrollment in Medicaid at 1 month postrelease: postintervention count, intervention group: 22; postintervention count, comparison group: 8 Using a prescription drug from Medicaid: postintervention count, intervention group: 11; postintervention count, comparison group: 2 Using any Medicaid mental health service at 3 months postrelease: postintervention count, intervention group: 18; postintervention count, comparison group: 3</td>
<td></td>
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</table>

Follow-up: 1–3 months |

Abbreviations: ADHD = Attention-deficit/hyperactivity disorder; AMHS = Adult Mental Health Services; CAMHS = Community Child and Adolescent Mental Health Services; CI = Confidence Interval; COMP = Comparator; CTI = Critical Time Intervention; DSM-IV = *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition; GP = general practitioner; INT = Intervention; N/A = Not applicable; NR = Not reported; OR = Odds ratio; PACIC = Patient Assessment of Chronic Illness Care; PTSD = Posttraumatic stress disorder; QOL = quality of life; SD = Standard deviation; SE = Standard error; SSI = Supplemental Security Income; U.K. = United Kingdom; U.S. = United States; WHO = World Health Organization.
### Appendix C. Critical Appraisal Table

#### Table C.1. Critical Appraisal

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<thead>
<tr>
<th>Author, Year</th>
<th>Selection Bias</th>
<th>Performance Bias</th>
<th>Attrition Bias</th>
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</table>
Appendix D. Excluded Studies and Background Literature

Excluded Studies


Allende-Richter, S., P. Glidden, M. Maloyan, Z. Khoury, M. Ramirez, and K. O’Hare, “A Patient Navigator Intervention Supporting Timely Transfer Care of Adolescent and Young Adults of Hispanic Descents Attending an Urban Primary Care Pediatrics Clinic,” *Pediatric Quality and Safety*, Vol. 6, No. 2, March–April, 2021, p. e391. Participants


Assessment of DoD-Provided Healthcare for Members of the United States Armed Forces Reserve Components, Inspector General, Department of Defense, Arlington, Va.: Department of Defense, October 8, 2014. Study design


Bar-Haim, Yair, *Threat Monitoring and Behavioral Health Throughout the Deployment and Career Cycles: A Translational Study*. Prepared for the U.S. Army Medical Research and Materiel Command, Tel Aviv, Israel: Tel Aviv University, October 1, 2019. Outcome


Carpenter, L., The Carolina Autism Transition Study (CATS), Department of Army, September 2019. Outcome


Chavarria, María del Mar, “Understanding the Effects of a Mindful Yoga Intervention on the Psychological Well-Being of Student Veterans,” Ann Arbor, Mich.: ProQuest Information & Learning, 2020. Intervention


Chung, R. J., J. Jasien, and G. R. Maslow, “Resident Dyads Providing Transition Care to Adolescents and Young Adults with Chronic Illnesses and Neurodevelopmental Disabilities,” *Journal of Graduate Medical Education*, Vol. 9, No. 2, April 2017, pp. 222–227. Participants


Collins, Michael V., “The Effectiveness of a Transition Program for Black Freshmen Based on Preventive Mental Health Principles and Laboratory Training Methods,” Ann Arbor, Mich.: ProQuest Information & Learning, 1980. Participants


De Cunto, C. L., “Transición en la atención médica, de la pediatría a la medicina del adulto” “[Transition in health care, from pediatrics to adult care],” *Archivos Argentinos de Pediatría*, Vol. 110, No. 4, August 2012, pp. 341–347. Language


Donkoh, C., K. Underhill, and P. Montgomery, “Independent Living Programmes for Improving Outcomes for Young People Leaving the Care System,” *Cochrane Database of Systematic Reviews*, No. 3, 2006. Intervention


Dunn, V., “Young People, Mental Health Practitioners and Researchers Co-Produce a Transition Preparation Programme to Improve Outcomes and Experience for Young People Leaving Child and Adolescent Mental Health Services (CAMHS),” BMC Health Services Research, Vol. 17, No. 1, April 20, 2017, p. 293. Intervention


Guo, Christopher, Julia Pollak, and Melissa Bauman, *Results of a Decade of RAND Work on Veteran Life*, Santa Monica, Calif.: RAND Corporation, RR-1095-OSD, January 1, 2016. Study design


Han, A. X., S. R. Whitehouse, S. Tsai, S. Hwang, and S. Thorne, “Perceptions of the Family Physician from Adolescents and Their Caregivers Preparing to Transition to Adult Care,” BMC Family Practice, Vol. 19, No. 1, August 23, 2018, p. 140. Intervention

Hancock, N., J. Smith-Merry, and K. McKenzie, “Facilitating People Living with Severe and Persistent Mental Illness to transition from Prison to Community: A Qualitative Exploration of Staff Experiences,” International Journal of Mental Health Systems, Vol. 12, 2018, p. 45. Study design

Harry, Melissa Lindley, “The Effectiveness of Participant-Directed Home and Community-Based Services for Young Adults with Long-Term Care Disabilities: Analysis of a Randomized Control Trial,” Ann Arbor, Mich.: ProQuest Information & Learning, 2017. Participants


King, C., H. Merrick, and A. Le Couteur, “How Should We Support Young People with ASD and Mental Health Problems as They Navigate the Transition to Adult Life Including Access to Adult Healthcare Services,” Epidemiology and Psychiatric Sciences, Vol. 29, January 9, 2020, p. e90. Study design


Levy, Ben, Jessica Song, Dorothy Luong, Laure Perrier, Mark Bayley, Laura Hartman, Lennox Huang, Laura Thompson, Amanda Woo, Joanne Zee, Gail Andrew, Kelly Arbour-Nicitopoulos, Brian Chan, C. J. Curran, Gina Dimitropoulos, Monica Kastner, Shauna Kingsnorth, Anna McCormick, Michelle Nelson, David Nicholas, Melanie Penner, and Alene Toulany, “Identification and Prioritization of Transitional Care Interventions (TCIs) for Adolescents and Young Adults with Childhood-Onset Disabilities: A Systematic Review,” 2019. Outcome


Morgan, Sarah K., “The Utilization and Efficacy of Bibliotherapy for Alcohol Use Disorder in Overcoming Barriers to Mental Health Treatment in Incarcerated Populations,” Ann Arbor, Mich.: ProQuest Information & Learning, 2021. Participants


Munõz-Solomando, Antonio, Mervyn Townley, and Richard Williams, “Improving Transitions for Young People Who Move from Child and Adolescent Mental Health Services to Mental Health Services for Adults: Lessons from Research and Young People’s and Practitioners’ Experiences,” Current Opinion in Psychiatry, Vol. 23, No. 4, 2010, pp. 311–317. Study design


Nehls, Mark S., *Veteran’s Treatment Courts: Alternative Justice for the Criminal Veteran*, Montgomery, Ala.: Air University, Air Command and Staff College Maxwell Air Force Base United States, April 1, 2011. Study design


Okumura, M. J., A. O. Hersh, J. F. Hilton, and D. S. Lotstein, “Change in Health Status and Access to Care in Young Adults with Special Health Care Needs: Results from the 2007 National Survey of Adult Transition and Health,” *Journal of Adolescent Health, Vol. 52, No. 4, April 2013, pp. 413–418. Intervention*


Oyesanya, Tolu, Janet Prvu Bettger, Lindsey Byom, Gabrielle Harris, Callan Loflin, Kaitlyn Daly, Lesly Rink, “Transitions of Care Interventions to Improve Quality of Life: A Systematic Literature Review,” PROSPERO 2020 CRD42020147345. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020147345. Participants


Panagioti, Maria, Gavin Daker-White, Alex Hodkinson, Claire Planner, Kelly Birtwell, Sally Giles, Alex Hall, and Stephen Campbell, “Controlled Interventions for Improving Healthcare Transitions Among Older People Living in Care Homes: A Systematic Review,” PROSPERO 2021 CRD42021224313. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42021224313. Intervention


“Patient Mix ‘Aging.’ Uninsured Veterans Turning to VA,” US Medicine, Vol. 20, No. 11, June 1, 1984, pp. 1, 24. Study design

Patient Protection and Affordable Care Act, Public Law 111-148. U.S. House of the Legislative Counsel for the Use of the U.S. House of Representatives (As Amended Through May 1, 2010). Study design


Shaw, Suzanne K., Measuring the Success of Warrior Transition Units, Carlisle Barracks, Pa.: Army War College, April 30, 2009. Study design

Shehani, Samasinghe, Sharon Medlow, Jane Ho, and Katharine Steinbeck, “Chronic Illness and Transition from Paediatric to Adult Care: A Systematic Review of When Illness Specific Clinical Guidelines for the Management for Chronic Illnesses Require Paediatric to Specialist Adult Health Care to Identify and Discuss the Transition Care Process,” PROSPERO 2018 CRD42018107607. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42018107607. Outcome


Soir, Erik L. de, “The Belgian End of Mission Transition Period: Lessons Learned from Third Location Decompression after Operational Deployment,” Brussels: Queen Astrid Military Hospital, April 1, 2011. Study design


“Transition to Adult Care for Youth with Special Health Care Needs,” *Paediatrics & Child Health*, Vol. 12, No. 9, November 2007, pp. 785–793. Study design


Varty, M., and L. L. Popejoy, “Focusing on Adult Health Care to Improve Transition for Youth with Chronic Disease,” Western Journal of Nursing Research, January 22, 2020, p. 193945919900172. Study design


“What are the barriers and facilitators perceived or experienced by the users, providers and practitioners of joined-up care across health, social care, education and other services for disabled children and young people with severe complex needs?,” PROSPERO 2019 CRD42019151334. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42019151334. Outcome

“What are the most effective models of health, social care and education services working together to prepare disabled children and young people with severe complex needs for employment?,” PROSPERO 2020 CRD42020167078. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020167078. Outcome

“What are the most effective ways that health, social care and education services can work together to support disabled children and young people with severe complex needs to participate in and benefit from education and social activities?,” PROSPERO 2020 CRD42020164793. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020164793. Study design

“What is the experience of disabled children and young people with severe complex needs and their families and carers of the joint delivery of health, social care and education services?,” PROSPERO 2019 CRD42019151318. Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42019151318. Outcome


Young, J. T., D. Arnold-Reed, D. Preen, M. Bulsara, N. Lennox, and S. A. Kinner, “Early Primary Care Physician Contact and Health Service Utilisation in a Large Sample of Recently Released Ex-Prisoners in Australia: Prospective Cohort Study,” *BMJ Open*, Vol. 5, No. 6, June 11, 2015, p. e008021. Duplicate


**Background Studies**


Bare, Virginia M., “Overcoming Access Barriers to Disability Benefits in the Air Reserve Component (ARC),” Maxwell Air Force Base, Ala.: Air Command and Staff College, December 1, 2018. Background


Campbell, F., K. Biggs, S. K. Aldiss, P. M. O’Neill, M. Clowes, J. McDonagh, A. While, and F. Gibson, “Transition of Care for Adolescents from Paediatric Services to Adult Health Services,” *Cochrane Database of Systematic Reviews*, No. 4, 2016. Background


Farmer, Carrie M., Terri Tanielian, Christine Buttorff, Phillip Carter, Samantha Cherney, Erin L. Duffy, Susan D. Hosek, Lisa H. Jaycox, Ammarah Mahmud, and Nicholas M. Pace, Integrating Department of Defense and Department of Veterans Affairs Purchased Care: Preliminary Feasibility Assessment, Santa Monica, Calif.: RAND Corporation, RR-2762-DHA/VHA, 2018. Background


Pai, Ahna L. H., and H. Marie Ostendorf, “Treatment Adherence in Adolescents and Young Adults Affected by Chronic Illness During the Health Care Transition from Pediatric to Adult Health Care: A Literature Review,” *Children’s Health Care*, Vol. 40, No. 1, 2011, pp. 16–33. Background


Steinbeck, K. S., V. A. Shrewsbury, V. Harvey, K. Mikler, K. C. Donaghue, M. E. Craig, and H. J. Woodhead, “A Pilot Randomized Controlled Trial of a Post-Discharge Program to Support Emerging Adults with Type 1 Diabetes Mellitus Transition from Pediatric to Adult Care,” *Pediatric Diabetes*, Vol. 16, No. 8, December 2015, pp. 634–639. Background


Tax Cuts and Jobs Act, Public Law 115-97, 2017. Background


Zhou, H., P. Roberts, S. Dhaliwal, and P. Della, “Transitioning Adolescent and Young Adults with Chronic Disease and/or Disabilities from Paediatric to Adult Care Services—An Integrative Review,” *Journal of Clinical Nursing*, Vol. 25, Nos. 21–22, November 2016, pp. 3113–3130. Background


H.R. 3590, Patient Protection and Affordable Care Act, 2010.


