Evidence-based Practice Center
Technical Brief Protocol

Project Title: Management Strategies to Reduce Psychiatric Readmissions

I. Background and Objectives for the Technical Brief

Repeated hospitalizations on a psychiatric unit, affecting primarily the seriously mentally ill, are a substantial problem. Between 40 percent and 50 percent of patients with a history of repeated psychiatric hospitalizations are readmitted within 12 months.[1-3] Readmissions are costly and disruptive to individuals and families[4] and can lead both providers and patients to feel demoralized or have a sense of failure. While they can reflect severity of psychiatric illness or ineffective inpatient care, or lack of adherence with outpatient care, in some cases readmission may be more related to community resources issues such as employment and residential status.[5] A decrease in number of psychiatric admissions, typically measured over 30 days, 90 days, or 1 year, is an important measure of successful outpatient mental health treatment. With increasing pressure to decrease health care costs, reducing hospital bed days (psychiatric or otherwise) is often a key priority for providers and insurers.

Key factors in decreasing the likelihood of subsequent psychiatric admissions include (1) rendering sufficient *inpatient* care to address adequately the acute presenting problem and stabilize the patient's psychiatric status;[4] (2) ensuring an adequate discharge plan[6] and delivery of sufficient support services to transition psychiatric care successfully from an inpatient to an outpatient setting (e.g., discharge services, followup calls, short-term case management, bridge visits, and psychoeducation);[7,8] and (3) continuing adequate outpatient services to allow the individual to remain in the community.[9-12] Effectively preventing psychiatric readmissions includes providing alternatives to psychiatric hospitalization (e.g., day hospital, short-term crisis unit, various forms of supported housing, assertive community treatment services) should a subsequent psychiatric crisis develop.

This technical brief stems from two important perceptions by clinicians, patients, and often families about inpatient psychiatric care: (1) *psychiatric hospital stays have become too brief* (in the context of financial pressures and limited outpatient support[4]) and (2) *issues underlying both acute danger to self and others*[13] *and functional recovery necessary to remain an outpatient are not always addressed*,[14] so the risk of psychiatric readmission may be only superficially lowered. Little is known about the (comparative) effectiveness of different lengths of hospital stay for these patients (including circumstances under which shorter [or longer] stays might be more effective), transition support services after discharge, or alternatives to psychiatric hospitalization.[7] Nominators for this technical brief are concerned about changes based on the assumption that reducing length of stay (LOS) is efficacious and cost-effective; however, whether such analyses adequately consider short- and long-term costs to different stakeholders is debatable. Short stays may not permit psychiatric professionals to develop adequate discharge plans, particularly for transitional support. Uncertainty surrounds the comparative effectiveness and costs of alternatives to psychiatric hospitalization and of transitional support services after discharge. The influence of possible effect modifiers and mediators is unknown. Key contextual variables include treatment adherence, housing stability, quality of life, substance use disorders,

involvement in the criminal justice system, clinical engagement, and access to outpatient services.

This technical brief will address management strategies to reduce psychiatric hospital readmission (specifically, readmissions to psychiatric units in general hospitals and to psychiatric hospitals). It will describe and compare three core components of interventions (management strategies) for patients with psychiatric hospitalizations: LOS for inpatient care, transition support services (which involves care provided as the individual moves to outpatient care), and alternatives to hospitalization (which involves outpatient care provided in place of psychiatric hospitalization).

II. Guiding Questions

1. Describe core components for management strategies to reduce readmissions: LOS, transition support services, and alternatives to hospitalization.
    a. For LOS for psychiatric hospitalizations: What are clinically meaningful categorizations of LOS; advantages/disadvantages of different LOSs; how do LOSs vary by patient demographics, diagnosis, and coexisting conditions; and specific harms or safety issues?
    b. For transition support services: What are the different types or modalities of transition support services proposed for or used in clinical practice; advantages/disadvantages of each; how do transition support services vary by patient demographics, diagnosis, and coexisting conditions; and specific harms or safety issues?
    c. For alternatives to hospitalization: What are the different alternatives to psychiatric hospitalization that have been proposed or used in clinical practice; advantages/disadvantages of each; how do alternatives to hospitalization vary by patient demographics, diagnosis, and coexisting conditions; and specific harms or safety issues?
2. Describe the context in which management strategies are used.
    a. How do these management strategies vary across the United States?
    b. For our primary outcome of interest: how accurate and valid are psychiatric readmissions data? What are other key secondary outcomes to consider for assessing the advantages/disadvantages of the various management strategies[1]?
    c. What kinds of training/certification, staffing, and other resources are required to ensure optimal use of management strategies?
3. Describe current evidence about the effectiveness of these management strategies. What is the effect of each strategy on readmissions and the secondary outcomes[2]?

[1] See Table 1
[2] See Table 1

4. Identify important issues raised by the use of these management strategies for reducing readmissions.

   a. What are other immediate and long-term implications (such as ethical, privacy, equity, or cost considerations) of current length of psychiatric admissions, available transition support services, and alternatives to hospitalization?

   b. What gaps exist in the current evidence base on these management strategies? What are possible areas of future research?

III. Methods

1. Data Collection: Information to address our Guiding Questions (GQs) will come from three sources: published literature searches, grey literature searches, and Key Informants (KIs). For GQs 1, 2, and 4, we will review the published and grey literature prior to the interviews with KIs and after to substantiate any new insights that the KIs might provide. We will explore points of commonality or departure between KI insights and the published literature in our analysis. Our review of the literature will be targeted and will rely on the best and most recent evidence available to support GQs 1, 2, and 4. For GQ 3, we will conduct a comprehensive and systematic search of the peer-reviewed and grey literature to answer this GQ and present all available and eligible evidence that meet our inclusion criteria. For GQ 4, we anticipate that KIs may identify ongoing or planned research.

A. Discussions with Key Informants.

KIs provide context to empirical findings (or lack of them) and may raise new concerns that prompt additional literature searches. Because we are not surveying a representative sample of KIs, their insights require further empirical exploration, through re-review of our searches or additional searches of the evidence. Our synthesis (integrating findings from the literature review and KI insights) will emphasize empirical evidence whenever possible. We will identify unconfirmed KI insights as hypothesis-generating ideas for GQs 1, 2, and 4; we will ask them about sources of evidence for GQ 3.

Specifically, our responses to GQs 1 (description of core components for management strategies to reduce readmissions), 2 (context in which management strategies are used), and 4 (key important issues raised by the use of these management strategies for reducing readmissions) will be augmented by the insights from the KI discussions. Subquestions under GQs 1, 2, and 4 serve as prompts to discuss issues further: we may follow new avenues of discussion, should conversations with KIs reveal new insights that require further exploration.

Identifying Experts Without Conflicts of Interest (COIs). We will determine possible COIs for research teams and stakeholders at the start of a project and will consult with the Agency for Healthcare Research and Quality (AHRQ) about disclosure or removal from the project for those individuals with clear financial or intellectual COIs. These specific steps may be insufficient, however, for ensuring freedom from bias. Other requirements include ensuring balance in perspectives and interests for stakeholder groups and our core teams. Our aim is to provide AHRQ with a technical brief that is as objective and unbiased as possible.

Engaging Relevant Stakeholder Groups. Stakeholder and partner engagement ensures usability and applicability of Evidence-based Practice Center (EPC) products and, therefore, is critical to AHRQ's mission. When engaging stakeholders, we will aim to ensure a balance of viewpoints.

We will identify the distinct perspectives that are essential for informing a well-rounded and balanced technical brief about management strategies for reducing psychiatric readmissions. Specifically, we will seek to recruit the following as KIs: mental health providers, health services researchers, policymakers, patient advocacy groups, and payers.

To facilitate broad participation, we will use staff with substantial experience in moderating calls, follow a semistructured guide with built-in places for various stakeholders to provide input, call on silent individuals to elicit their views, redirect conversations as needed, and offer opportunities for feedback through other media (e.g., via email). We will adhere to all Office of Management and Budget requirements and limit our standardized questions to no more than nine nongovernment-associated individuals, thus OMB clearance will not be required for the project's interview activities..

We will engage KIs via teleconference, with targeted email communication as needed. We will provide materials for review 1 week before calls, with reminder emails to KIs 2 to 3 days before the scheduled teleconference. We generally have specific questions for stakeholder input, but we will also provide time on calls for suggestions about our GQs. Further, we will obtain input from diverse stakeholders through peer review and public comment.

B. Grey Literature Search.

We will use the grey literature to identify information beyond the published literature on quality measures outcomes in treatment of serious mental illness. Sources for the grey literature include the following:

- HAPI: Health and Psychosocial Instruments provides bibliographic access and descriptions of tests, manuals, rating scales, and other instruments used to assess health and behavior. They assist researchers and others in locating instruments used in the health fields, psychosocial sciences, occupational sciences, library and information science, and education.
- OpenSIGLE: Operated by GreyNet, the OpenSIGLE Repository preserves and makes openly accessible research results originating in the International Conference Series on Grey Literature. GreyNet together with the Institute for Scientific and Technical Information-National Center for Scientific Research designed the format for a metadata record, which encompasses standardized PDF attachments for full-text conference preprints, PowerPoint presentations, abstracts, and biographical notes. All 11 volumes (1993–2009) of the GL Conference Proceedings are available in the OpenSIGLE Repository.
- ClinicalTrials.gov: ClinicalTrials.gov offers up-to-date information for locating federally and privately supported clinical trials for a wide range of diseases and

conditions. The site currently contains approximately 12,400 clinical studies sponsored by the National Institutes of Health, other federal agencies, and private industry. Studies listed in the database are conducted in all 50 states and in more than 100 countries.

- WHO International Clinical Trials Registry Platform: This platform is a network of international clinical trials registers to ensure a single point of access and the unambiguous identification of trials.
- Academic Search Complete: This source provides information from a wide range of academic areas, including business, social sciences, humanities, general academic, general science, education, and multicultural topics. This multidisciplinary database features full text for more than 4,000 journals with many dating back to 1975, abstracts and indexing for more than 8,200 scholarly journals, and coverage of selected newspapers and other news sources.
- NIH RePORTER: The information found in RePORTER is drawn from several extant databases (eRA databases, Medline®, PubMed Central, the NIH Intramural Database, and iEdison), using newly formed linkages among these disparate data sources.

We will also search Web sites of the relevant professional associations such as the American Psychiatric Association, the National Alliance on Mental Illness, the National Association of Psychiatric Health Systems, and the National Institute of Mental Health.

C. Published Literature Search.

We will systematically search the published literature for information to address our GQs.

Planned Databases. We propose to conduct searches in PubMed (MEDLINE), PsycINFO, and the Cochrane Library.

Draft Search Strategy. An experienced research librarian will employ a refined search strategy in our planned databases based on our earlier work on the topic development for this issue (Appendix A). We will also review the reference lists of identified papers and reviews to identify additional relevant papers. We will update the literature review by repeating the initial search concurrent with the peer review process. In addition, we will examine any literature suggested by KIs, Peer Reviewers, or public commenters and, if appropriate, incorporate it into the final work.

Proposed Eligibility Criteria. All identified citations will be imported into an EndNote database. Table 1 describes our proposed eligibility criteria for GQ 3. We will use inclusive criteria for GQs 1, 2, and 4 to capture the broad context of how these management strategies are used vis-à-vis psychiatric hospitalizations, but we will apply more stringent criteria for GQ 3 in our assessment of the evidence linking use of these strategies to change in psychiatric readmission rates.

Two trained members of the research team will independently review all abstracts for eligibility based on the pre-established inclusion/exclusion criteria. Studies marked for

possible inclusion by either reviewer will undergo a full-text review. Any study with inadequate information in the abstract will also undergo full-text review.

We will retrieve and review the full text of all articles included during the title/abstract review phase. Each full-text article will be independently reviewed by two trained members of the research team for inclusion or exclusion on the basis of the eligibility criteria (Table 1). Disagreements about inclusion will be resolved by discussion or consensus with review by the full research team as needed.

All results will be tracked in the EndNote database. We will record the reason that each excluded full-text publication did not satisfy the eligibility criteria so that we can later compile a comprehensive list of such studies in the final work.

Table 1. Proposed Eligibility Criteria for Management Strategies to Reduce Psychiatric Readmissions

Criterion	Inclusion	Exclusion
Population	All GQs ▪ Adults (≥18) with repeated psychiatric hospital admissions or were assessed as being at high risk of psychiatric readmission[a], including subgroups based on diagnosis (e.g., psychotic, mood, or personality disorders), demographics (e.g., elderly, homelessness, race/ethnicity, gender), and comorbidities (e.g., co-occurring medical conditions, developmental disorders, or substance use disorders)	All GQs ▪ < 18 years ▪ Single psychiatric hospital admission
Intervention	All GQs ▪ Varying LOS for psychiatric hospitalization length ▪ Transition support services after discharge (e.g., discharge services, followup calls, short-term case management, bridge visits, psychoeducation, referral to Assertive Community Treatment) ▪ Alternatives to psychiatric hospitalization (e.g., partial hospitalization, crisis residential services, extended observation [including emergency department], intensive case management, intensive outpatient treatment including outpatient commitment, Assertive Community Treatment)	All GQs ▪ Interventions that do not specify the use of at least one of these three interventions
Comparator	GQs 1, 2, and 4 ▪ No limitations GQ 3 ▪ *LOS for psychiatric hospitalization* a. Different LOS compared with each other b. LOS compared with one or more variants of the three intervention management strategies listed above ▪ *Transition support services after discharge:* a. Different transition support services compared with each other b. Transition support services compared with usual care c. Transitions support services compared with one or more variants of the three intervention management strategies listed above ▪ *Alternatives to psychiatric hospitalization* a. Different alternatives to hospitalization compared with each other b. Alternatives to hospitalization compared with psychiatric hospitalization	GQs 1, 2, and 4 ▪ Not applicable GQ 3 ▪ Interventions that do not employ at least one of these comparators

Criterion	Inclusion	Exclusion
Outcomes	GQs 1, 2, and 4 ▪ No limitations GQ 3 *Primary outcome*[b]: ▪ Readmission rates *Secondary outcomes* ▪ Treatment adherence ▪ Housing stability ▪ Social support ▪ Remission of disorder ▪ Physical health outcomes ▪ Quality of life ▪ Clinical engagement ▪ Individual and family feelings about adequately addressing factors prompting the admission ▪ Individual and family felt the stay was sufficient to address safety and dangerousness concerns ▪ Satisfaction with care ▪ Relapse ▪ Criminal justice encounters ▪ Suicide, suicide attempts, other self-injurious behaviors ▪ Homicide and other aggressive behaviors ▪ Relapse into substance use	GQs 1, 2, and 4 ▪ Not applicable GQ 3 ▪ Outcomes not attributable to the interventions of interest
Timeframes	All GQs ▪ None	All GQs ▪ None
Setting	All GQs ▪ Inpatient or outpatient, primary care or mental health (specialty) care	All GQs ▪ None
Study design	GQs 1, 2, and 4 ▪ No limitations GQ 3 ▪ Systematic reviews ▪ Randomized controlled trials ▪ Nonrandomized controlled trials ▪ Prospective and retrospective cohort studies ▪ Case-control studies ▪ Single-group pre-post studies	GQs 1, 2, and 4 ▪ Not applicable GQ 3 ▪ Case reports ▪ Case series ▪ Cross-sectional studies ▪ Opinions ▪ Commentaries ▪ Nonsystematic reviews ▪ Letters to the editor with no primary data
Other	All GQs ▪ English language ▪ Published 1990 and later	All GQs ▪ Non-English language ▪ Published prior to 1990

[a] Includes patients with violent behavior.
[b] Studies not reporting on readmission rates will be ineligible for GQ 3.
GQ = Guiding Question; LOS = length of stay.

2. Data Organization and Presentation:

A. Information Management

Information collected on management strategies to reduce psychiatric hospital readmissions includes information gleaned from comprehensive searches of the peer-reviewed literature, targeted searches of the grey literature, and discussions with KIs.

Given the limited nature of the available empirical evidence, we believe that KIs will be particularly vital to shaping this Technical Brief.

Data Abstraction: We will abstract data from each included study for GQ 3, using a standardized template organized to address the GQs. One member of the research team will collect the data, and a second team member will review it for accuracy and completeness. The following information will be obtained from each study, where applicable: author; year of publication; source of study funding; study design characteristics; study population; interventions; comparators; outcomes; timeframes; and settings.

Integration of Information: Data from the published literature will be integrated with information from the grey literature and KI discussions. We anticipate that GQs 1 and 2 will be informed primarily by grey literature or nonsystematic published reviews by information, with KI discussions serving to identify relevant data sources and insights in the absence of evidence. Parts of these questions may also be informed by published literature or peer-reviewed evidence

In instances where evidence from empirical studies informs the response, we will first provide a summary of the empirical evidence, followed by a summary of information from other sources.

Responses to GQ 3 will be based primarily on peer-reviewed, published literature and may be combined with information from the grey literature. Responses to GQ 4 will be shaped primarily by information from KIs with confirmation from the published literature.

B. Data Presentation

Our findings will be presented in the order of GQs. We will qualitatively summarize findings from the published and grey literature searches and KI interviews, and we will ensure that we integrate findings from both, while clearly noting the source for the result (i.e., KI interview, grey literature or published literature). For questions with empirical evidence or in-progress studies to inform the results, we will build on study-specific tables to generate cross-cutting tables describing the state of evidence on study characteristics (number and types of study designs addressing management strategies to reduce psychiatric readmissions) and types of outcomes. We will explore ways to present data graphically based on the availability and appropriateness of the information that we find.

IV. References

1. Klinkenberg WD, Calsyn RJ. Predictors of receipt of aftercare and recidivism among persons with severe mental illness: a review. Psychiatr Serv. 1996 May;47(5):487-96. Epub: 1996/05/01. PMID: 8740489.
2. Olfson M, Mechanic D, Boyer CA, et al. Assessing clinical predictions of early rehospitalization in schizophrenia. J Nerv Ment Dis. 1999 Dec;187(12):721-9. Epub: 2000/02/09. PMID: 10665466.
3. Montgomery P, Kirkpatrick H. Understanding those who seek frequent psychiatric hospitalizations. Arch Psychiatr Nurs. 2002 Feb;16(1):16-24. Epub: 2002/03/06. PMID: 11877602.
4. Williams P, Csipke E, Rose D, et al. Efficacy of a triage system to reduce length of hospital stay. Br J Psychiatry. 2014 Mar 13Epub: 2014/03/15. PMID: 24627298.
5. Schmutte T, Dunn CL, Sledge WH. Predicting time to readmission in patients with recent histories of recurrent psychiatric hospitalization: a matched-control survival analysis. J Nerv Ment Dis. 2010 Dec;198(12):860-3. Epub: 2010/12/08. PMID: 21135635.
6. Steffen S, Kosters M, Becker T, et al. Discharge planning in mental health care: a systematic review of the recent literature. Acta Psychiatr Scand. 2009 Jul;120(1):1-9. Epub: 2009/06/03. PMID: 19486329.
7. Vigod SN, Kurdyak PA, Dennis CL, et al. Transitional interventions to reduce early psychiatric readmissions in adults: systematic review. Br J Psychiatry. 2013 Mar;202(3):187-94. Epub: 2013/03/05. PMID: 23457182.
8. Viggiano T, Pincus HA, Crystal S. Care transition interventions in mental health. Curr Opin Psychiatry. 2012 Nov;25(6):551-8. Epub: 2012/09/21. PMID: 22992544.
9. Ilgen MA, Hu KU, Moos RH, et al. Continuing care after inpatient psychiatric treatment for patients with psychiatric and substance use disorders. Psychiatr Serv. 2008 Sep;59(9):982-8. Epub: 2008/09/02. PMID: 18757590.
10. Dieterich M, Irving CB, Park B, et al. Intensive case management for severe mental illness. Cochrane Database Syst Rev. 2010(10):CD007906. Epub: 2010/10/12. PMID: 20927766.
11. Marshall M, Lockwood A. Assertive community treatment for people with severe mental disorders. Cochrane Database Syst Rev. 2000(2):CD001089. Epub: 2000/05/05. PMID: 10796415.
12. Marshall M, Crowther R, Sledge WH, et al. Day hospital versus admission for acute psychiatric disorders. Cochrane Database Syst Rev. 2011(12):CD004026. Epub: 2011/12/14. PMID: 22161384.
13. Meehan J, Kapur N, Hunt IM, et al. Suicide in mental health in-patients and within 3 months of discharge. National clinical survey. Br J Psychiatry. 2006 Feb;188:129-34. Epub: 2006/02/02. PMID: 16449699.
14. Babalola O, Gormez V, Alwan NA, et al. Length of hospitalisation for people with severe mental illness. Cochrane Database Syst Rev. 2014;1:CD000384. Epub: 2014/01/31. PMID: 24477710.

V. Definition of Terms

Alternatives to psychiatric hospitalization: community-based alternatives can relieve the need for full hospital care or serve as part of the discharge process and, depending on availability, may include short term crisis stabilization units or psychiatric emergency rooms, intensive outpatient treatment (which may involve outpatient commitment or Assertive Community Treatment), partial hospitalization, residential treatment or housing with intensive long term services and supports.

Length of stay: duration of a single episode of psychiatric hospitalization (from date of admission to date of discharge).

Psychiatric hospital readmission: a new episode of psychiatric hospitalization following a previous psychiatric hospitalization. The readmission does not need to be at the same psychiatric unit or hospital.

Psychiatric hospitalization: admission to a psychiatric unit in any hospital, which could be either a general hospital with a psychiatric unit or a psychiatric hospital.

Transition support services: coordinated care and support services (e.g., discharge services, followup calls, short-term case management, bridge visits, psychoeducation, referral to Assertive Community Treatment) to help the patient transition from psychiatric inpatient to the community.

VI. Summary of Protocol Amendments

In the event of protocol amendments, the date of each amendment will be accompanied by a description of the change and the rationale.

(NOTE THE FOLLOWING PROTOCOL ELEMENTS ARE STANDARD SECTIONS TO BE ADDED TO ALL TECHNICAL BRIEF PROTOCOLS)

VII. Key Informants

Within the Technical Brief process, Key Informants serve as a resource to offer insight into the clinical context of the technology/intervention, how it works, how it is currently used or might be used, and which features may be important from a patient of policy standpoint. They may include clinical experts, patients, manufacturers, researchers, payers, or other perspectives, depending on the technology/intervention in question. Differing viewpoints are expected, and all statements are crosschecked against available literature and statements from other Key Informants. Information gained from Key Informant interviews is identified as such in the report. Key Informants do not do analysis of any kind nor contribute to the writing of the report and have not reviewed the report, except as given the opportunity to do so through the public review mechanism

Key Informants must disclose any financial conflicts of interest greater than $10,000 and any other relevant business or professional conflicts of interest. Because of their unique clinical or content expertise, individuals are invited to serve as Key Informants and those who present with potential conflicts may be retained. The TOO and the EPC work to balance, manage, or mitigate any potential conflicts of interest identified.

VIII. Peer Reviewers

Peer reviewers are invited to provide written comments on the draft report based on their clinical, content, or methodologic expertise. Peer review comments on the preliminary draft of the report are considered by the EPC in preparation of the final draft of the report. Peer reviewers do not participate in writing or editing of the final report or other products. The synthesis of the scientific literature presented in the final report does not necessarily represent the views of individual reviewers. The dispositions of the peer review comments are documented and will be published three months after the publication of the Evidence report.

Potential Reviewers must disclose any financial conflicts of interest greater than $10,000 and any other relevant business or professional conflicts of interest. Invited Peer Reviewers may not have any financial conflict of interest greater than $10,000. Peer reviewers who disclose potential business or professional conflicts of interest may submit comments on draft reports through the public comment mechanism.

Appendix

Table 1. Search terms

Search	Query	Items found
#1	Search ("Patient Admission"[Mesh] OR "Patient Discharge"[Mesh] OR "patient discharge"[All Fields] OR "discharge service"[All Fields] OR "discharge services"[All Fields] OR "Patient Readmission"[Mesh] OR "brief admission"[All Fields] OR "patient admission"[All Fields] OR readmission*[All Fields])	49074
#2	Search ("Length of Stay"[Mesh] OR "length of stay"[All Fields] OR "Advance Directives"[Mesh] OR "advance directives"[All Fields] OR "Behavioral Medicine"[Mesh] OR "behavioral health"[All Fields] OR "Observation"[Mesh] OR "Case Management"[Mesh] OR "case management"[All Fields] OR "Crisis Intervention"[Mesh] OR "crisis intervention"[All Fields] OR "crisis residential service"[All Fields] OR "crisis residential services"[All Fields] OR psychoeducation[All Fields] OR "bridge visit"[All Fields] OR "bridge visits"[All Fields] OR "follow up call"[All Fields] OR "follow up calls"[All Fields] OR "conditional release"[All Fields] OR conservatorship[All Fields] OR "transitional services"[All Fields] OR "transitional care"[All Fields] OR "transition support services"[All Fields] OR "community treatment orders"[All Fields] OR "assertive community treatment"[All Fields] OR "outpatient treatment"[All Fields] OR "out-patient treatment"[All Fields] OR "extended leave"[All Fields] OR ("commitment of mentally ill" AND outpatient*) OR (outpatient AND commitment) OR (involuntary AND commitment) OR "Jurisprudence"[Mesh] OR "Mandatory Programs"[Mesh] OR "mandatory program"[All Fields] OR "mandatory programs"[All Fields] OR "supervised discharge"[All Fields] OR "mandated treatment"[All Fields] OR "forced treatment"[All Fields] OR "compulsory community treatment"[All Fields] OR "compulsory treatment"[All Fields] OR "extended leave"[All Fields] OR "community treatment order"[All Fields] OR "involuntary outpatient treatment"[All Fields] OR "involuntary medication"[All Fields] OR "forced medication"[All Fields] OR ("court-ordered"[All Fields] AND medication[All Fields]) OR "assisted outpatient treatment"[All Fields])	279160
#3	Search (#1 and #2)	13058
#4	Search ("Hospitals, Psychiatric"[Mesh] OR "Psychiatric Department, Hospital"[Mesh]) OR "Community Mental Health Services/utilization"[Majr] OR "psychiatric hospitalization"[All Fields] OR (psych* and hospital*))	29410
#5	Search (#3 and #4)	1018
#6	Search ("Mentally Ill Persons"[Mesh] OR "Mental Disorders"[Mesh] OR "Diagnosis, Dual (Psychiatry)"[Mesh] OR "Substance-Related Disorders"[Mesh:NoExp] OR "Psychotic Disorders"[Mesh] OR "Behavior, Addictive"[Mesh] OR "Alcohol-Related Disorders"[Mesh] OR "Amphetamine-Related Disorders"[Mesh] OR "Cocaine-Related Disorders"[Mesh] OR "Inhalant Abuse"[Mesh] OR "Marijuana Abuse"[Mesh] OR "Opioid-Related Disorders"[Mesh] OR "Phencyclidine Abuse"[Mesh] OR "Substance Abuse, Intravenous"[Mesh] OR "Mentally ill"[All Fields] OR "seriously mentally ill"[All Fields] OR SMI[All Fields] OR SPMI[All Fields] OR "serious mental illness"[All Fields] OR "seriously and persistently mental ill"[All Fields] OR "severe mental illness"[All Fields] OR "mental disorders"[All Fields] OR "mental problems"[All Fields] OR "mental illness"[All Fields])	965286
#7	Search (#3 and #6)	2663
#8	Search (#5 or #7)	2778
#9	Search (#3 and #6) Filters: Humans	2646
#10	Search (#3 and #6) Filters: Other Animals	1
#11	Search (#10 not #9)	0

#12	Search (#9 not #11)	2646
#13	Search (#9 not #11) Filters: Adult: 19+ years	1741
#14	Search (#9 not #11) Filters: Publication date from 1990/01/01 to 2014/12/31; Adult: 19+ years	1455
#15	Search (("review"[Publication Type] AND "systematic"[tiab]) OR "systematic review"[All Fields] OR ("review literature as topic"[MeSH] AND "systematic"[tiab]) OR "meta-analysis"[Publication Type] OR "meta-analysis as topic"[MeSH Terms] OR "meta-analysis"[All Fields])	129116
#16	Search (#14 and #15)	6
#17	Search ("Randomized Controlled Trial"[Publication Type] OR "Single-Blind Method"[MeSH] OR "Double-Blind Method"[MeSH] OR "Random Allocation"[MeSH])	458805
#18	Search #14 and #17	92
#19	Search (#9 not #11) Filters: Clinical Trial; Publication date from 1990/01/01 to 2014/12/31; Adult: 19+ years	152
#20	Search #14 AND (“prospective cohort” OR “prospective studies”[MeSH] OR (prospective*[All Fields] AND cohort[All Fields] AND (study[All Fields] OR studies[All Fields]))	106
#21	Search #14 and ("Case-Control Studies"[MeSH] OR "Cohort Studies"[MeSH] OR "Organizational Case Studies"[MeSH] OR "Cross-Over Studies"[MeSH])	619
#22	Search (#16 or #18 or #19 or #20 or #21)	702
#23	Search (#16 or #18 or #19 or #20 or #21) Filters: English	637
#24	Search (#22 NOT #23) Non-English	65