Title:

Medical/Surgical Readmissions in Patients With Co-Occurring Serious Mental Illness: A Qualitative Systematic Literature Review

Abigail E. Caron, SN1
Rachel A. Solomon, SN1
Hayley D. Germack, PhD2
Nancy P. Hanrahan, PhD3

(1) School of Nursing, Northeastern University, Boston, MA, USA
(2) School of Nursing Department of Acute and Tertiary Care, University of Pittsburgh, Pittsburgh, PA, USA
(3) College of Nursing and Health Sciences, University of Massachusetts- Boston, Boston, MA, USA

Session Title:
Rising Stars of Research and Scholarship Invited Student Posters

Slot:
RS PST1: Sunday, 17 November 2019: 11:45 AM-12:15 PM

Applicable Category:
Academic, Students, Researchers

Keywords:
Comorbidity, Medical-surgical readmissions and Serious mental illness

References:
Abstract Summary:
The objectives of this systematic review were to: (1) provide a synthesis of the literature investigating serious mental illness (SMI) and medical-surgical readmissions in the adult population, and (2) quantify the relationship between SMI diagnosis and medical-surgical readmission rates.

Content Outline:

1. **Objective:** to estimate the relationship between comorbid serious mental illness (SMI) diagnosis and 30-day medical-surgical readmissions.
2. **Methods:**

   1. Searched five databases (2012 to 2017) to identify relevant articles on the relationship between SMI diagnosis and readmissions in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)
   2. Used the National Institute of Health’s Quality Appraisal Tool for Observational Cohort and Cross-Sectional Studies guidelines to appraise studies and assess risk of bias
   3. Data were narratively synthesized and a pooled random effects unadjusted odds ratio was estimated using meta-analysis
   4. Heterogeneity was investigated using subgroup analysis and meta-regression

3. **Results:**

   1. Of the 424 articles remained after removing duplicates, nine met inclusion criteria
      1. All studies were retrospective observational cohort studies
      2. Meta-analysis showed that people with SMI have greater odds of readmission than people without SMI (pooled OR 1.38, CI 1.23–1.56, I²= 98.6%)
   3. There was heterogeneity in patient cohorts, study methodology, and definition of SMI

4. **Conclusion:** there is a meaningful relationship between SMI diagnosis and medical-surgical readmissions

**Topic Selection:**

Rising Stars of Research and Scholarship Invited Student Posters (25201)

**Abstract Text:**

**Background:** Value-based population care models are replacing traditional patient care and business models to lower costs of patient care and increase value. To motivate hospital and health care systems toward value-based care, the Center for Medicare & Medicaid (CMS) enforced a penalty for hospital readmissions. One subpopulation—patients with serious mental illness—are particularly vulnerable to rehospitalization. We examine the question: When patients with serious mental illness (SMI) enter hospitals for a medical and surgical condition, how do they fare? This study systematically reviews published research evidence that examines the relationship between medical and surgical hospitalizations and readmissions for individuals with co-occurring serious mental illness.

**Methods:** In accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) we used the following databases: CINAHL, PsycINFO, Web of Science, and PubMed (from January 1, 2012 to December 27, 2017) to identify relevant articles on the relationship between SMI diagnosis and medical/surgical readmissions. We used the National Institute of Health’s Quality Appraisal Tool for Observational Cohort and Cross-Sectional Studies guidelines to appraise studies and assess risk of bias. **Data were narratively synthesized and a pooled random effects unadjusted odds**
ratio was estimated using meta-analysis. Heterogeneity was investigated using subgroup analysis and meta-regression.

**Results:** Our search yielded 424 articles after removing duplicates. Fourteen met inclusion criteria. All studies were retrospective observational cohort studies. A wide range of medical/surgical cohorts were investigated. Study methodology varied with little agreement on the definition of SMI, data sources, medical/surgical diagnoses or demographic/clinical variables. Twelve studies found significant relationships between SMI and readmissions. Two studies did not support the significant relationship. The meta-analysis showed that people with SMI have greater odds of readmission than people without SMI (pooled OR 1.38, CI 1.23-1.56, I² = 98.6%). There was heterogeneity in patient cohorts, study methodology, and definition of SMI. No significant possibility of publication bias was detected (Classic fail-safe N = 3480).

**Discussion:** Our results suggest that patients with SMI have higher rates of medical/surgical readmissions than patients without SMI. Given the prevalence of SMI in patients hospitalized for medical/surgical problems and the heterogeneity of evidence, further research on the relationship between SMI and readmissions is critically needed.