

Comparing Prescription Opioids, Methadone, and Heroin Rates from the Treatment Episode Data Set to the RADARS® System Treatment Center Programs

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Abstract

Background

The Researched, Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System provides timely product-specific, national surveillance data on prescription opioid abuse. This analysis assesses whether annual abuse trends observed in the RADARS System treatment center programs are similar to trends from the Treatment Episodes Data Set (TEDS).

Methods

The RADARS System Opioid Treatment Program (OTP) enrolls individuals entering treatment for opioid use disorders at primarily medication-assisted programs and the Survey of Key Informants' Patients Program (SKIP) enrolls individuals entering treatment at for opioid use disorders primarily private substance abuse programs. TEDS includes records on admissions to substance abuse treatment centers for all substances, including prescription and non-prescription opioids.

From 2008 through 2014, OTP and SKIP were compared to data from the TEDS 2014 national report for endorsement of use in the past month of drugs common to all three surveys. Population rates for OTP and SKIP were computed as the total number of endorsements divided by the sum of the population in three-digit ZIP codes where at least one respondent resided. A Pearson's correlation coefficient was calculated to test the relationship between RADARS System programs and TEDS population rates over time for prescription opioids excluding methadone, methadone, and heroin abuse.

Results

In OTP, prescription opioids ($r=0.82$), methadone ($r=0.88$), and heroin ($r=0.68$) were strongly correlated with TEDS data. In SKIP, prescription opioids ($r=0.80$) and methadone ($r=0.85$) were strongly correlated with TEDS data and heroin showed a negative correlation ($r=-0.40$). In TEDS 66% of individuals entering treatment for opioid abuse reported heroin as their primary drug, whereas, 54% in OTP and 31% in SKIP reported heroin as their primary drug.

Conclusion

Trends in both RADARS System programs appear to track well with national data from TEDS for both prescription opioids and methadone.

Introduction

Cicero, Inciardi, and Muñoz¹ note that surveillance systems, in addition to media reports, were early indicators of the prescription opioid abuse epidemic. They note that abuse of extended release products, such as OxyContin®, proved unexpected given preclinical and clinical studies suggesting lower abuse potential¹. The discrepancy in these results highlight the importance of surveillance systems in measuring the intended and unintended impact of interventions aimed at reducing prescription opioid abuse (e.g. abuse deterrent technologies). The Researched, Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System provides timely product-specific, national and regional surveillance data on prescription and illicit opioid abuse. This analysis assesses whether annual abuse trends observed in the RADARS System Treatment Center Programs are similar to national trends from the Treatment Episodes Data Set (TEDS).

Methods

Programs

The RADARS System Opioid Treatment Program (OTP) enrolls individuals entering treatment for opioid use disorders at medication-assisted treatment programs. The RADARS System Survey of Key Informants' Patients Program (SKIP) enrolls individuals with opioid dependence entering treatment primarily at private substance abuse treatment programs not using methadone. TEDS includes records on admissions to substance abuse treatment centers nationally for all substances. This analysis focuses on the primary substance reported in TEDS.

Methods, continued

Statistical Analysis

From 2008 through 2014, OTP and SKIP were compared to data from the TEDS 2014 national report for endorsement of use in the past month of drugs common to all three surveys: prescription opioids, heroin, and methadone. Population rates for OTP and SKIP were computed as the total number of endorsements divided by the sum of the population of the three-digit ZIP codes where at least one respondent resided. These population rates were compared to rates calculated from Table 1.1a in the TEDS 2014 national report². The numerator represented the number of respondents who reported a primary drug of heroin, non-prescription methadone, and other opiates/synthetics. A Pearson's correlation coefficient was calculated to test the relationship between RADARS System programs and TEDS population rates over time for prescription opioids excluding methadone, methadone, and heroin abuse.

Results

In OTP, prescription opioids ($r=0.82$), methadone ($r=0.88$) and heroin ($r=0.68$) were strongly correlations with TEDS data. (Figure 1). In SKIP, prescription opioids ($r=0.80$) and methadone ($r=0.85$) were strongly correlated with TEDS data (Figure 2). Heroin showed a moderate negative correlation ($r=-0.40$).

Figure 1. OTP Program and TEDS Rates of Prescription Opioids, Methadone, and Heroin per 100,000 Population

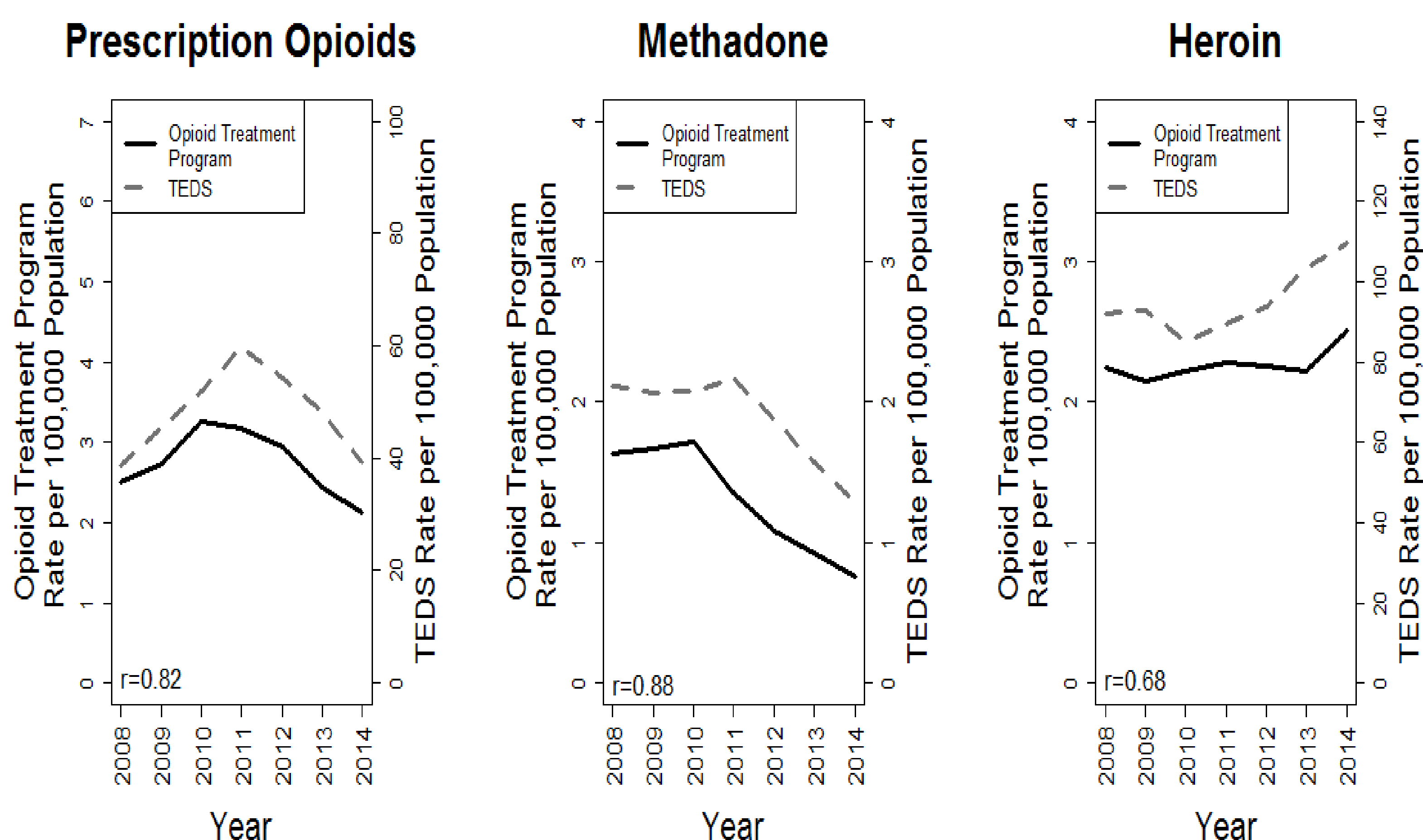
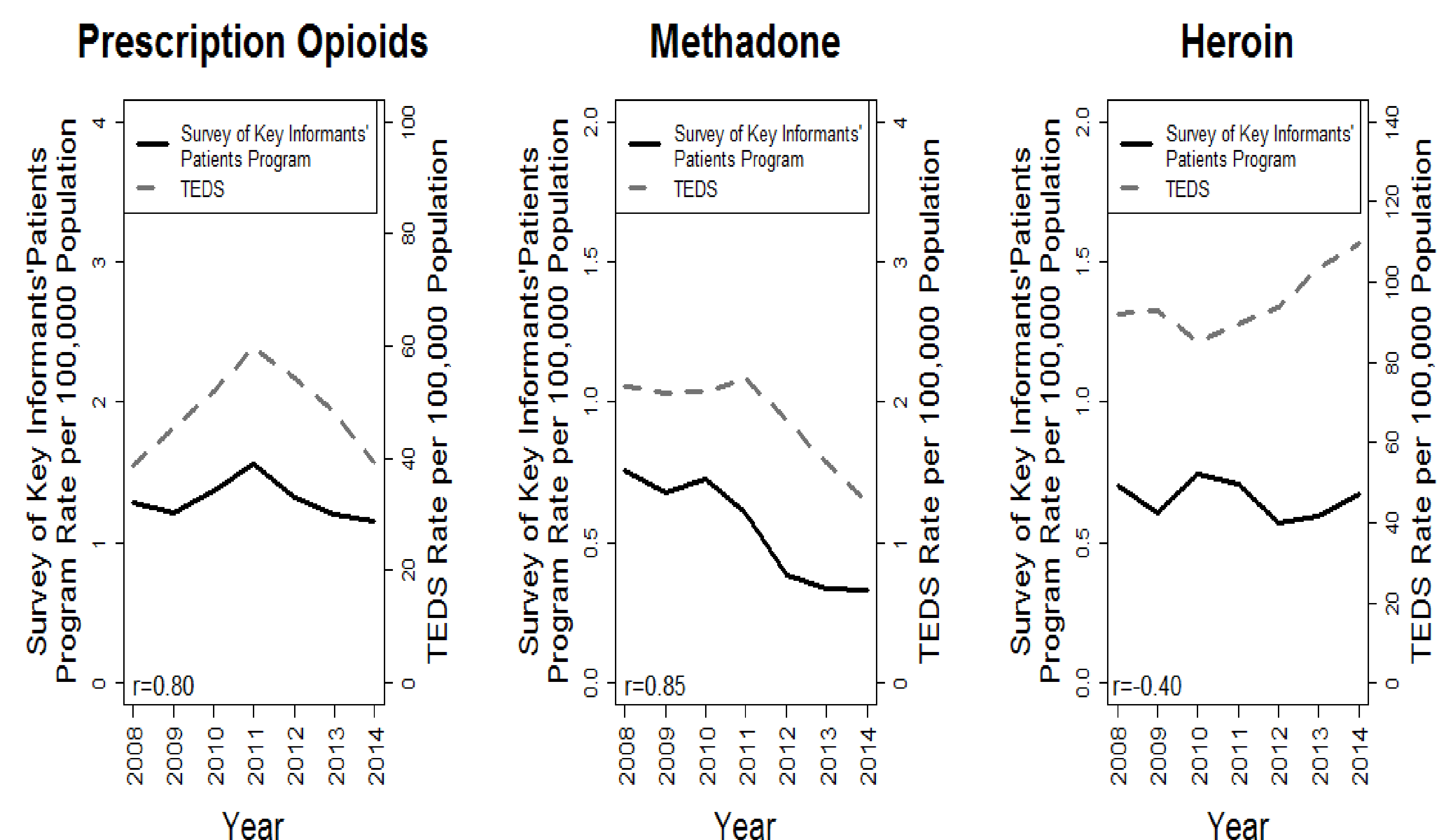


Figure 2. SKIP Program and TEDS Rates of Prescription Opioids, Methadone, and Heroin per 100,000 Population



Discussion and Conclusion

Trends in both RADARS System OTP and SKIP Programs appear to track well with national data from TEDS for both prescription opioids and methadone. Correlations with heroin were strong in the OTP but negatively correlated with rates in the SKIP. The discrepancy is likely due to differences in the populations. A smaller proportion of the SKIP program report heroin as their primary drug, therefore changes in abuse patterns in the SKIP may reflect changes in abuse among a sample of primarily prescription opioid users. In addition, discrepancies in rates may also be because the TEDS survey samples from individuals entering substance abuse treatment for substances other than opioids (e.g. alcohol and cocaine).

References

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2. Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Treatment Episode Data Set (TEDS): 2004-2014. National Admissions to Substance Abuse Treatment Services. BHSIS Series S-84, HHS Publication No. (SMA) 16-4986. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2016.

Conflict of Interest

The authors are affiliated with the RADARS® System, an independent nonprofit post-market surveillance system that is supported by subscription fees from pharmaceutical manufacturers. None of the authors have a direct financial, commercial, or other relationship with any of the subscribers

Support

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