TEDS Data

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1 Introduction to TEDS

The Treatment Episode Data Set (TEDS) system serves as a repository for treatment data routinely collected by states for the purposes of monitoring their substance use treatment systems. It is comprised of selected data items from states' administrative records that are converted to a standardized format which is consistent across all states.

The TEDS system is comprised of two major components: the Admissions Data Set (TEDS-A) and the Discharges Data Set (TEDS-D). Data for the TEDS Admissions (TEDS-A) file were first reported in 1992, while data for the TEDS-D were first reported in 2000.

2 Admissions

TEDS-A provides demographic, clinical, and substance use characteristics of persons admitted to substance use treatment services. The unit of analysis is treatment admissions to state-licensed or certified substance use treatment centers that receive federal public funding.

TEDS-A has two parts: a minimum data set and a supplemental data set. The former is collected by all states; the latter is collected by some.

The minimum data set consists of 19 items that include:

- demographic information;

- primary, secondary, and tertiary substances used by the subject, and their route of administration, frequency of use, and age at first use;
- source of referral to treatment;
- number of prior treatment episodes; and
- service type, including planned use of medication-assisted (i.e., methadone, buprenorphine, or naltrexone) opioid therapy.

TEDS-A;s supplemental data set includes 15 psychiatric, social, and economic items.

3 Discharges

The second major component of the TEDS system, TEDS-D (consisting of discharge records), includes the same variables as the admissions (TEDS-A) component, with the addition of:

- type of service at discharge,
- length of stay, and
- reason for discharge or discontinuation of service.

4 Some characteristics

- **Missing data:** There is one type of missing data (code -9): Missing/unknown/not collected/invalid.
- **Census state:** 72 U.S States (page: 23-24, file: TEDS-A).

5 Some potential research questions

(I asked ChatGPT for some possible questions)

5.1 What patient-level factors predict treatment completion versus early dropout?

- Outcome: Discharge reason coded as "treatment completed" vs. other (available in the TEDS-D file, but you could approximate completion by joining admissions to discharges).
- Key predictors:
  - Demographics: AGE, GENDER (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - Socioeconomic: EDUC, EMPLOY (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - Clinical: Primary substance (SUB1), frequency of use (FREQ1), prior episodes (NOPRIOR) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Model ideas: Logistic regression; Bayesian logistic with random intercepts for state.

5.2 How does time-to-treatment entry ("wait days") vary by referral source and geography?

- Outcome: DAYWAIT (days waiting to enter treatment) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Predictors:
  - Referral: PSOURCE (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - Geography: REGION or DIVISION (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Model ideas: Ordered logistic regression; survival-analysis treating DAYWAIT as time-to-event; hierarchical model with random effects by DIVISION.

5.3 What demographic and substance-use patterns characterize clients reporting injection drug use (IDU)?

- Outcome: IDU flag (TEDS-A-2022-DS0001-info-codebook_v1.pdf)

- Predictors:
  - Demographics: AGE, RACE, MARSTAT (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - Substance profile: SUB1–SUB3 flags (e.g., HERFLG, MTHAMFLG) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Model ideas: Multivariable logistic regression; classification tree to detect high-risk profiles.

5.4 Are there distinct "latent classes" of polysubstance users, and how do they differ in outcomes?

- Data: Flags for alcohol (ALCFLG), cocaine (COKEFLG), heroin (HERFLG), methamphetamine (MTHAMFLG), etc. (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Analysis:
  - Latent class analysis (LCA) on the substance flags.
  - Characterize each class by demographics (AGE, GENDER) and outcomes (e.g., LOS from TEDS-D).

5.5 How does the use of medication-assisted opioid therapy (METHUSE) influence treatment length and completion?

- Exposure: METHUSE (yes/no) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Outcomes:
  - Type of service/setting (SERVICES), as a proxy for intensity (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - LOS and completion from discharge file.
- Model ideas: Competing-risks survival model (completion vs. dropout); propensity-score-adjusted Cox model.

5.6 What factors are associated with high-frequency (daily) primary substance use at admission?

- Outcome: FREQ1 = "Daily use" (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Predictors:
  - Sociodemographic: LIVARAG (living arrangement), PRIMINC (income source) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - Clinical: Age at first use (FRSTUSE1), prior episodes (NOPRIOR) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Model ideas: Ordinal logistic regression; Bayesian mixed-effects model with state random intercept.

5.7 How do arrest history and criminal-justice referrals relate to treatment engagement?

- Outcomes:
  - Completion status or LOS.
- Key predictors:
  - ARRESTS (in past 30 days) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
  - PSOURCE = "Court/criminal justice referral" and detailed CJ referral (DETCRIM) (TEDS-A-2022-DS0001-info-codebook_v1.pdf)
- Model ideas: Survival analysis for time-in-treatment; logistic regression for completion, adjusting for covariates.

References

Appendix