



PROJECT TITLE: The Effectiveness of Substance Abuse Treatment Services in Combating Opioid Crisis

PROPOSAL NUMBER: Pop3

PI: Hui Zhao

RESEARCH THEME: Population Health

BUDGET: \$50,000

MULTI-UNIVERSITY PROJECT: NO

PROJECT YEAR: 1

DESCRIPTION:

Each day, more than 115 Americans die due to overdosing on opioid. Addiction to opioid (including heroin and fentanyl) becomes a serious national crisis that devastates public health. To combat the opioid crisis, the Substance Abuse Treatment Services (SATS) facilities across the country provide opioid addicts professional counseling and treatments. The objective of this project is to evaluate the effectiveness of the different opioid addiction treatment programs provided by these SATS facilities, by using sophisticated econometric models to analyze the national survey data on SATS facilities, the epidemic data on opioid abusers, and other related data.

HOW THIS IS DIFFERENT THAN RELATED RESEARCH:

While the opioid crisis has attracted much research recently, most of the research focuses on the supply side of the problem and investigate ways to control the supply and prescription of opioid such that only for legitimate reasons, patients can have access to reasonable amount of opioid. Much less research investigates the demand side of the problem. As we know, opioid abusers, who typically have developed addictions, often seek illegal access to opioid or other alternatives. Our study takes this angle and looks from the demand side of the opioid problem by investigating the effectiveness of the different treatments and services used to recover opioid addicts. While some medical papers have examined the effectiveness of SATS from individual patient perspective, our study evaluates SATS from a population perspective, from which we expect to provide policy guidance of managing such programs.

EXPERIMENTAL PLAN:

The experimental plan includes the following tasks:

- 1) Acquire and clean data from the National Survey of Substance Abuse Treatment Services from 2006-2016.
- 2) Acquire metrics such as total deaths caused by opioid overdosing from Centers for Disease Control and Prevention (CDC) WONDER Database from 2006-2016.
- 3) Collect demographic information from census data.
- 4) Build an econometric model that evaluates the effectiveness of SATS in reducing opioid overdosing related deaths.
- 5) If possible, collect individual opioid addicts information from a few SATS facilities to validate finding.
- 6) Report and disseminate research findings.

EXPECTED MILESTONES:

The expected milestones of this project include:

- 1) Collection and compilation of data from National Survey of Substance Abuse Treatment Services.
- 1) Collection and compilation of data on opioid overdosing related deaths from CDC WONDER.
- 3) Integration of different data sources into a master datafile.
- 4) An econometric model that evaluates the effectiveness of SATS.
- 5) A manuscript documenting the research.

BENEFITS TO INDUSTRY:

- 1) Evaluate the effectiveness of SATS in curbing opioid overdosing related deaths from a population level perspective.
- 2) Recommend effective programs (e.g. individual counseling, group counseling) to recover opioid abusers.
- 3) Combat the opioid crisis from the demand-side

EXPECTED DELIVERABLES:

- 1) A master datafile on opioid overdosing related deaths and SATS facility across the country.
- 2) An econometric model that predicts the effectiveness of SATS program.
- 3) Policy recommendation for how to manage SATS programs to best curb opioid overdosing death.