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Data on the Diversion, Nonmedical Use and Adverse Outcomes Associated with Pharmaceutical Opioids

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Three tables provide a guide to existing data sources regarding the nonmedical use of pharmaceutical opioids in the United States.

Background

Recent increases in the nonmedical use of pharmaceutical opioids and the adverse outcomes associated with them have stimulated a large amount of research and data collection on this public health problem. Systematic organization of the available data sources is needed to facilitate ongoing research, analysis, and evaluation.

Method

A list of keywords associated with diversion, nonmedical use, and adverse outcomes of pharmaceutical opioid use generated 94 peer-reviewed academic articles and a number of governmental and nongovernmental sources. All sources were in English, contained quantitative data, and were published between January 1995 and April 2012. A list of 20 topics was developed independently by two researchers and differences were resolved through discussion. Sources were examined for relevance to each topic and categorized according to the scale which they were collected.

Results

The configuration of data indicates the diverse array of information currently available on the nonmedical use of pharmaceutical opioids in the US. Data appear relatively sparse regarding nonmedical polydrug use, availability of opioids via the black market, and mechanisms of opioid diversion, such as doctor shopping and forgery.

Conclusion

This index serves as a reference for researchers and policymakers who seek to further our understanding of the public health problems associated with pharmaceutical opioids and ameliorate associated adverse outcomes. Outlining the array of available data provides a global perspective and identifies topics that contain more and less quantitative information to guide our understanding and inform future research directions for the pharmaceutical opioid system in the US.

Tables 1-3. Categorization of Data Sources Regarding Nonmedical Use, Diversion, and Adverse Outcomes

Row headings indicate salient topics within each area, while column headings indicate the highest scale at which the data source is relevant. Within a table cell, each item (starting with "□") indicates a data source, followed by informational resources and example analyses for that source. Items without an explicit source name indicate lists of independent studies that have been conducted for a given topic and scale level.

NONMEDICAL USE	National†	State†	Multi-Center†	Single-Center†
Prevalence of Misuse among Patients	□ Toxicology [1] □ [2]		□ RADARS® [3], [4] □ [5], [6], [7]	
Prevalence of Nonmedical Use among Non-Patients	□ **DAWN** [8], [9], [10] □ MTF* [11], [12] □ NAVIPPRO [13],[14], [15] □ NESARC* [16], [17], [18] □ NLAES* [17] □ **NSDUH*** [19],[20], [21], [22]	□ CDAS* [23], [24], [25] □ [26]	□ RADARS® [3], [4] □ [27], [28]*, [29], [30],	□ [31], [32], [33], [34], [35], [36], [37], [38]
Characteristics of those exhibiting Nonmedical Use	□ **DAWN** [8], [10] □ MTF* [11] □ NAVIPPRO [13],[14], [15] □ NESARC* [17], [18] □ NLAES* [17] □ **NSDUH*** [19], [20], [21], [22], [39], [40], [41], [42], [43] □ **NVSS** [44], [45] □ **TEDS** [46], [47] □ Toxicology [1]	□ CDAS* [23], [24], [25] □ [26]	□ RADARS® [3], [48] □ [5], [49], [28]*, [6], [29], [7], [30]	□ Treatment Centers [50], [51], [52] □ [33], [53], [35], [54], [37], [37], [55], [56], [38]
Prevalence of Polydrug Use	□ **DAWN** [8], [10] □ NAVIPPRO [13], [15]		□ [29]	□ [32], [35], [57], [37], [54], [53], [38]
DIVERSION				
Sources of Prescription Drugs	□ MTF* [12], [58] □ NAVIPPRO [13], [14] □ **NSDUH*** [19],[39],[43],[59]	□ CDAS* [23], [24], [25]	□ RADARS® [3], [48], [60] □ [61], [30]	□ [32], [36]
Availability of Opioids	□ MTF* [11]	□ CDAS* [23],[24],[25]	□ [62] [63], [61]	
ADVERSE OUTCOMES				
Opioid Poisoning	□ **DAWN** [8], [10], [64] □ NIS [65], [66] □ NPDS [67], [68], [69], [70]	□ CDAS*[23], [24], [25] □ Claims Data [71]	□ ACMT [72]	□ Medical Records [73] □ [56]
Fatal Opioid Poisoning	□ NPDS [67], [68], [69] □ **NVSS** [44], [45], [74]	□ Examiners [75], [76]		□ Medical Records [73]
Substance Use Disorders	□ **DAWN** [8], [10] □ NAVIPPRO [13], [14], [15] □ NESARC* [16], [17], [18] □ NLAES* [17] □ **NSDUH*** [19],[39],[40],[41] □ VA Medical Records [77]	□ Treatment Centers [78] □ CDAS*[23] [24], [25] □ Claims Data [71]		□ [34], [35], [37],

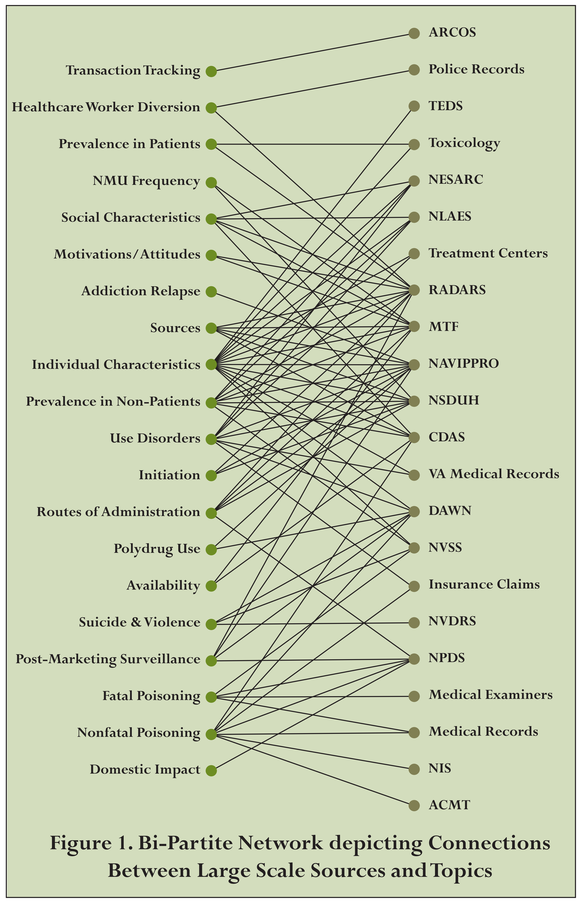

Figure 1. Bi-Partite Network depicting Connections Between Large Scale Sources and Topics

* Source measurement does not strictly limit responses to pharmaceutical opioids, but instead lists "pain killers," "pain medicine," "pain relievers," or "narcotics other than heroin"

† Scale categorization indicates the highest geographical scale at which the source is relevant. Many sources also have more detailed information at smaller scales than are listed here.

Bold type font indicates a data source that is publicly available.

Acronyms Used: ACMT (American College of Medical Toxicology), ARCOS (Automation of Reports and Consolidated Order System), CDAS (Center for Drug and Alcohol Studies), DAWN (Drug Abuse Warning Network), MTF (Monitoring the Future), NAVIPPRO (National Addictions Vigilance Intervention and Prevention Program), NESARC (National Epidemiologic Survey on Alcohol and Related Conditions), NIS (Nationwide Inpatient Sample), NLAES (National Longitudinal Alcohol Epidemiology Survey), NPDS (National Poison Data System), NSDUH (National Survey on Drug Use and Health), NVDRS (National Violent Death Reporting System), NVSS (National Vital Statistics System), VA (Veterans Affairs), RADARS® (Researched Abuse, Diversion and Addiction-Related Surveillance), TEDS (Treatment Episode Data Set)

see more at http://www.pdx.edu/sysc/opioid-data-sources

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