New The DAWN Report

September 2005

DRUG ABUSE WARNING NETWORK

New DAWN: Why It Cannot Be Compared with Old DAWN

In Brief

Multiple improvements have caused a permanent disruption in trends for the Drug Abuse Warning Network (DAWN). As a result, comparisons cannot be made between old DAWN (2002 and prior years) and new DAWN. Changes to DAWN affect all of the following areas:

- Sample of hospitals
- Target population
- Boundaries of geographic areas
- Criteria for defining a DAWN case
- Data content for each case
- Methods for finding DAWN cases
- Methods to ensure data quality

In January 2003, the Substance Abuse and Mental Health Services Administration (SAMHSA) launched its redesign of the Drug Abuse Warning Network (DAWN). The new design brought needed improvements to the quality and utility of DAWN data. A consequence of these sweeping changes is that comparisons between old DAWN and new DAWN cannot be made.

This issue of *The DAWN Report* reviews the numerous changes to DAWN and summarizes why any comparisons between old and new DAWN would produce erroneous results and conclusions.

Background

Although the new DAWN was born in 2003, the redesign began in 1997.[1] Every aspect of DAWN was evaluated in terms of its contribution, potential benefit for users, and feasibility. The evaluation generated recommendations for a new design.

Before any changes were adopted, the recommendations were deliberated by external advisors and major stakeholders.[1] When disruption of trends became a possibility, the consensus was to focus on achieving DAWN's future potential, rather than preserving links to its past. Therefore, no data were collected to map old data with new data.

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Changes that preclude comparisons between old and new DAWN

No single improvement is responsible for the lack of comparability between old DAWN and new DAWN. Instead, it is the collective impact of many changes (Table 1), which include the following:

National estimates. A new sample of hospitals supports true national estimates. The prior sample produced estimates for only the coterminous United States, excluding Alaska and Hawaii.

Metropolitan-area estimates. New DAWN has added metropolitan areas that old DAWN did not cover. Also, metropolitan area boundaries have been updated to reflect the 2000 census. These boundary changes, which affect 13 of the original 21 metropolitan areas in old DAWN, prevent comparisons with any previous estimates.

New case criteria. DAWN now collects data on all types of drug-related emergency department (ED) visits. This includes many cases not captured before, excludes others, and overlaps with some (Table 2). Although DAWN continues to collect drug abuse cases, even those cases have changed and cannot be compared.

Information about each case. Changes in data items prevent new DAWN data from being mapped to the old data. Data items that were not useful or obtainable were eliminated if they could not be improved. New data items were added to better describe DAWN cases and distinguish among different types of drug-related visits.

New case finding methods. DAWN now requires a review of every ED chart to find DAWN cases. This method identifies cases more systematically, consistently, and completely than ever before. It also compromises any comparability between the new and old data.

Quality assurance. Performance measurement, systematic training, proactive problem identification, and on-site interventions are some of the approaches now used to improve the quality of DAWN data. These new quality protocols also render the new DAWN incomparable with the old DAWN.

Notes

1. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *Drug Abuse Warning Network: Development of a New Design (Methodology Report).* DAWN Series M-4. DHHS Publication No. (SMA) 02-3754. Rockville, MD, 2002.

Table 1. Comparison of major features, new DAWN versus old DAWN

New DAWN (began 2003)	Old DAWN (ended 2002)
Cases reported to DAWN	
All types of drug-related ED visits	ED visits related to drug abuse only
Simple case criteria: Any ED visit related to recent drug use	Complex case criteria: ED visits related to drug abuse, defined as the use of an illicit drug or the non-medical use of a licit drug for one of the following purposes: ■ Suicide attempt or gesture ■ Dependence ■ To achieve psychic effects
Current or recent drug use	Drug abuse at any time ■ Current or recent drug abuse ■ Past (history of) drug abuse
Patient's intent is not considered	Patient's intent to abuse a drug was key
Patients of any age	Patients age 6 to 97
Eight case types: ■ Suicide attempt ■ Seeking detox ■ Alcohol only (age < 21) ■ Adverse reaction (to pharmaceuticals) ■ Overmedication ■ Malicious poisoning ■ Accidental ingestion ■ Other (any case not categorized above)	One case type with three subcategories: ■ Suicide attempt or gesture ■ Seeking detox ■ Other drug abuse

New DAWN (began 2003)	Old DAWN (ended 2002)
Drugs reported to DAWN	
Only those drugs related to the ED visit	Any drug
All types of drugs: ■ Illicit drugs ■ Prescription and over-the-counter medications ■ Dietary supplements ■ Non-pharmaceutical inhalants	Same as new DAWN
Maximum of six drugs, plus alcohol	Maximum of four drugs, plus alcohol
"Alcohol-in-combination" for any case; "Alcohol only" for patients age < 21	"Alcohol-in-combination" (alcohol with another reportable drug) only
Current medications reported only if related to the visit	Current medications reported, even if unrelated to the visit
Other data items	
Whether each drug was confirmed by toxicology	No information about laboratory confirmation
Information about health: ■ Chief complaints ■ Diagnoses	No information about health
Expanded categories for patient disposition: ■ Three categories for treated and released ■ Five categories for patients admitted to the hospital	Limited categories for patient disposition: ■ One category for treated and released ■ One category for patients admitted to the hospital
Form and source of drug are not collected	Form and source of drug
Six categories for route of administration	Seven categories for route of administration
Other changes	
Case finding by retrospective review of medical charts for all patients treated in the ED	Screening methods with limited chart review
Rigorous reporter training and quality assurance	Limited oversight
Performance feedback to hospitals and reporters	Limited feedback
Sample of hospitals	
Sample of hospitals representing the complete United States	Sample of hospitals representing the coterminous United States (48 States)
Eligible hospitals: Short-term, general, non-Federal hospitals operating 24-hour EDs	Same as new DAWN
Complete National estimates based on: ■ Oversampling in designated metropolitan areas ■ "Supplementary sample" representing hospitals outside those areas in all 50 States and the District of Columbia	Estimates for coterminous United States based on: ■ Oversampling in 21 metropolitan areas ■ "National panel" sample representing hospitals outside those areas in the 48 States and the District of Columbia
Metropolitan areas represented: ■ Boundary definitions based on the 2000 census ■ Expansion to additional areas planned	Metropolitan areas represented: ■ Boundary definitions based on the 1980 census ■ Oversampling in 21 areas

ED = emergency department.
SOURCE: SAMHSA, Office of Applied Studies, Drug Abuse Warning Network, 2004.

For more information about new DAWN, see Substance Abuse and Mental Health Services Administration, Office of Applied Studies. *Drug Abuse Warning Network, 2003: Interim National Estimates of Drug-Related Emergency Department Visits.* DAWN Series D-26. DHHS Publication No. (SMA) 04-3972. Rockville, MD, 2004.

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Table 2. Comparison of DAWN cases, new DAWN versus old DAWN

Case type in new DAWN	Is there overlap with old DAWN?
Suicide attempt	Often, but the old DAWN category for suicide attempt al so included suicide gestures.
Seeking detox	Yes, but the new sample of hospitals affects the propensity to find such cases.
Alcohol only (age < 21)	No. Old DAWN collected data for alcohol-in-combination (alcohol with other drugs) only.
Adverse reaction	No. Old DAWN did not capture ED visits related to therapeutic drug use.
Overmedication	Possibly, but the extent of overlap cannot be determined. These are cases for which drug abuse was not explicitly documented in source record.
Malicious poisoning	No. Old DAWN excluded patients who did not intend to abuse the substance.
Accidental poisoning	No. Old DAWN previously required documentation of intent to abuse.
Case type "other" (those not classified above)	Often, but the extent of overlap cannot be determined. Old and new DAWN include cases involving intentional drug abuse. History of drug abuse (with no evidence of current use) is no longer reportable.

ED = emergency department.
SOURCE: SAMHSA, Office of Applied Studies, Drug Abuse Warning Network, 2004.