VIEWPOINT

Rethinking the Use of “Polysubstance” to Describe Complex Substance Use Patterns

Riley D. Shearer, MSc¹ , Gavin Bart, MD, PhD², and Charles Reznikoff, MD²

¹Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN, USA; ²Division of Addiction Medicine, Department of Medicine, Hennepin Healthcare, Minneapolis, MN, USA.

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Medical terminology requires precise meaning and clear understanding to inform patient care. The term “polysubstance use” lacks diagnostic specificity and may harm patients. In research, describing a range of substance use patterns as “polysubstance use” can blend heterogeneous patient populations and confuse interpretation between studies. With the overdose crisis increasingly fueled by the co-use of multiple substances, especially methamphetamine and opioids,¹ precise descriptions of use are needed to guide clinical and policy decisions.

ORIGIN OF “POLYSUBSTANCE USE”

The diagnosis of “polysubstance dependence” was first introduced in the 1980 Diagnostic and Statistical Manual of Mental Disorders (DSM)-III. In the DSM-III-R and DSM-IV, the diagnosis was revised to describe a combination of three or more substances that satisfies dependence criteria, but the use of no single substance meets criteria for dependence.² In 1992, the International Classification of Diseases 10th revision (ICD-10) defined polysubstance dependence as involving two or more substances where it is unclear which contributes the most to dependence. In the wake of these vague and contradictory definitions, clinicians and researchers began using “polysubstance” to describe a wide variety of substance use patterns. However, true polysubstance dependence was very rare.³ In 2013, the DSM-5 removed “polysubstance”; however, it persists as an imprecise term to describe patients who use multiple substances.⁴

IMPRECISE “POLYSUBSTANCE USE” TERMINOLOGY IS HARMFUL

Examples from Substance Use Research

Since 1984, the research literature increasingly includes “polysubstance use” despite its ambiguity. Grouping heterogeneous substance use patterns as polysubstance use may obscure trends and implications of specific substance use combinations. For example, among people receiving treatment for an opioid use disorder between 2011 and 2018, there was a 0.7% increase in “polysubstance use,” yet specific substance use combinations had much more substantial changes. For example, there was an 85% increase in methamphetamine and opioid co-use and a 40% decrease in anxiolytic (e.g., benzodiazepines) and opioid co-use.⁵ Lumping all co-occurring substance use into a single category conceals key findings that can inform health policy and investment in treatment resources.

As the overdose crisis increasingly involves stimulants, it is important that researchers identify specific substances involved in complex use patterns. For example, the patient demographics and health profiles of individuals who use opioids without stimulants, opioids with cocaine, and opioids with methamphetamine differ significantly.^{6,7} Broad groupings of substance use patterns may impair an effective response to emerging and deadly substance use patterns.

Examples from Clinical Addiction Medicine

“Polysubstance use” terminology in a clinical setting excludes information important for patient care. For example, a patient experiencing benzodiazepine and alcohol withdrawal symptoms will require different clinical interventions than a patient experiencing poisoning from an opioid and sedative overdose. Similarly, a patient with cannabis use disorder and intermittent cocaine use will benefit from a different treatment plan than a patient with opioid use disorder and regular gabapentinoid misuse. Referring to each scenario as “polysubstance use” omits necessary clinical information for the development of an evidence-based treatment plan. There is currently no treatment for “polysubstance use,” but effective treatments exist for specific substance use disorders or poisonings. Generalizing co-occurring substance use as “polysubstance use” is akin to asking an endocrinologist to develop a treatment plan for “multiple metabolic disorders.” Overly general descriptions

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deprive clinicians of relevant information for recommending effective treatments.

The terminology "polysubstance use" is perpetuated in clinical settings by language built into the electronic health record (EHR), inadequate addiction medicine training, and lack of standardized nomenclature for use of multiple substances. EHR databases prompt clinicians to select from a menu of built-in diagnostic phrases based on key words, which map to ICD-10 codes used in billing. However, these diagnostic phrases have neither clear definitions nor treatment implications. For example, in our EHR there are 48 separate diagnostic phrases containing "polysubstance," but none describes the specific substances involved. Over the course of one year, clinicians in our system selected "polysubstance" in over 87,000 patient encounters (3.4% of encounters system-wide), omitting important diagnostic and substance use details which could have guided treatment decisions.

POLICY AND PRACTICE RECOMMENDATIONS

Discussion and documentation of patient care by clinicians often relies on "polysubstance use" as a shorthand for drug use, without further elaboration, even if substance use is the primary reason for the clinical encounter. Given the widespread nature of the overdose crisis, all clinicians should receive training in how to identify and communicate complex patterns of substance use. The breadth of the overdose crisis requires that all clinicians play an active role in good clinical care, including proper documentation

Instead of "polysubstance use," a patient's drug use should be defined with the specific substances involved because each drug has unique toxicologic and treatment implications. We propose that clinicians describe the co-use of substances based on the primary or intended substance used, the presence of a substance use disorder, followed by the secondary or incidental substance use. For example, a patient with opioid use disorder who intends to use fentanyl and incidentally is exposed to methamphetamines would have active opioid use disorder with methamphetamine exposure. A patient presenting to an Emergency Department with a mixed overdose and no known history has opioid and methamphetamine toxicity, and unknown substance use disorder. The language used among clinicians, and in the EHR, should detail the information needed for appropriate treatment and continuing care. To support this, the EHR should include diagnostic phrases that include specific substances involved rather than simplifying distinct use patterns to "polysubstance use."

Researchers should avoid overly broad definitions of "polysubstance use." The methodology should explicitly define specific substance use patterns and whether measures of use meet diagnosis criteria for a substance use disorder. Precise and consistently used terminology will enhance communication and enable researchers to compare findings of emerging substance use trends. Additionally, clinical trials of

treatments for substance use disorders should carefully document a participant's co-occurring substance use. As the co-use of multiple substances increases, it is important to generate evidence on treatment efficacies in the context of co-occurring substance use.

CONCLUSIONS

To better address substance use disorders and the overdose epidemic, providers and patients deserve language that reflects the many complex ways substances affect patients. In both clinical and research settings, the specific substances involved should be described. In addition to improved training in addiction medicine, changes to the EHR should include specific diagnostic terminology and elimination of "polysubstance use" phrases. Different substance use patterns should be explicitly described in the methodology of research reports. Precise description of different use patterns will improve communication and inform policy and clinical decisions.

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Corresponding Author: Riley D. Shearer, MSc; Division of Health Policy and Management, School of Public Health, University of Minnesota, Minneapolis, MN, USA (e-mail: shear162@umn.edu).

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