



Police Enforcement Strategy Regarding the Misuse of Etomidate as a New Psychoactive Substance

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Abstract

The misuse of etomidate through electronic cigarettes in Indonesia has evolved from a clinical concern into a tangible threat to public health and safety. This article examines the characteristics of etomidate misuse as a new psychoactive substance (NPS) and proposes a more adaptive law enforcement strategy for regional police forces. The study employed a literature review covering pharmacology, criminology, narcotics policy, national regulations, reports from international agencies, and official police publications, which were qualitatively analyzed using content analysis. The analytical framework integrated the “ends–ways–means” strategic model, proactive policing, intelligence-led policing, and a criminal policy approach combining penal and non-penal measures. The analysis yielded three key findings. First, etomidate misuse was characterized by concealment within otherwise legal consumption devices, distribution through digital platforms, and the involvement of transnational actors. Second, although the classification of etomidate as a Schedule II narcotic strengthened the legal basis for enforcement, this regulatory development had not been accompanied by commensurate improvements in forensic detection capabilities or interagency coordination. Third, an effective enforcement strategy should incorporate generic scheduling, an interagency early warning system, strengthened criminal intelligence capabilities, and monitoring of digital distribution channels. This article proposes an enforcement model that integrates legal, forensic, intelligence, and operational policing dimensions.



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INTRODUCTION

The emergence of new psychoactive substances (NPS) over the past two decades has transformed the landscape of narcotics-related crime from one involving relatively stable substances into one characterized by chemical innovation that continually outpaces legal regulation. More than a thousand substances have been identified through global monitoring systems, many of which are characterized by molecular modifications intended to circumvent their inclusion in controlled-substance schedules (UNODC, 2023). The rate at which new compounds emerge generally exceeds the capacity of national authorities to adapt their regulatory frameworks; consequently, control systems that rely on static lists of substances may become less effective in addressing rapidly evolving drug markets (Santos et al., 2024). Monitoring in Europe reinforces this concern, with dozens of newly detected substances reported annually alongside hundreds of compounds that remain in circulation on a limited scale (European Union Drugs Agency, 2025).

Among these substances, etomidate occupies a distinctive position because it is a pharmaceutical agent with legitimate medical uses (Ekanayake et al., n.d.; Marazziti et al., 2026; Uhm et al., 2024; Zhang et al., 2024). Etomidate is a short-acting intravenous anesthetic agent known for its relative hemodynamic stability, making it particularly useful for the

induction of anesthesia in certain clinical and emergency settings (Forman, 2011). Its misuse has involved the incorporation of the substance into electronic cigarette liquids, including products commonly referred to as “Kpods,” and this pattern of use has been associated with dependence and significant perceptual and emotional disturbances (Lin & Lin, 2024). The associated neuropsychiatric effects may also present detection challenges because etomidate is not routinely included in standard toxicological screening panels (Ng et al., 2025).

In the Indonesian context, the legal response to etomidate gained a stronger basis after the substance was classified as a Schedule II narcotic under Minister of Health Regulation Number 15 of 2025. Prior to this classification, enforcement actions primarily relied on pharmaceutical regulations, which imposed substantially lighter criminal penalties and did not extend to users (Kompas, 2025). This regulatory gap coincided with an increase in reported cases in the Jakarta metropolitan area. During the first three months of 2026, the Jakarta Metro Police Narcotics Investigation Directorate reportedly uncovered 42 cases involving the distribution of etomidate, arrested 63 suspects, and seized approximately 11,000 vape cartridges containing the substance (Tempo, 2026a).

This article aims to examine the characteristics of etomidate misuse as a new psychoactive substance, identify the challenges faced by law enforcement authorities, and formulate a more adaptive enforcement strategy for regional police forces. The theoretical contribution of this research is to extend the literature on narcotics enforcement strategies, particularly in the context of new psychoactive substances in Indonesia. Its practical contribution is to provide recommendations for the Indonesian National Police and regional police units in developing more effective enforcement strategies to address etomidate misuse. The contribution of this research lies in integrating the “ends–ways–means” strategic model, proactive policing, intelligence-led policing, and a criminal policy approach combining penal and non-penal measures within a single analytical framework, an approach that has received limited attention in previous studies on etomidate misuse. The study further contributes by proposing an enforcement model that integrates legal, forensic, intelligence, and operational policing dimensions, which may serve as a reference for regional police units in responding to the evolving challenges posed by new psychoactive substances.

METHOD

This study employed a qualitative approach using a literature review method to examine substance characteristics, legal frameworks, and law enforcement strategies related to etomidate misuse. Relevant documents were analyzed as the primary sources of data (Bowen, 2009).

The literature was collected from reputable journal articles in pharmacology, forensic toxicology, criminology, and narcotics policy; reports from international organizations; national legislation and comparative regulations from other countries; official police publications; and credible media reports on relevant case developments. Sources were purposively selected based on recency, thematic relevance, and source credibility. The collected data were analyzed using qualitative content analysis through data condensation, data display, and conclusion drawing and verification (Miles et al., 2014). The credibility of the

findings was strengthened through cross-source triangulation by comparing regulatory documents, scientific evidence, and law enforcement data.

RESULTS AND DISCUSSION

Characteristics of Etomidate Misuse as a New Psychoactive Substance

Addressing the first research question, the literature review reveals that the characteristics of Etomidate misuse are defined by the medium of consumption. Electronic cigarette devices visually indistinguishable from legal products make the substance extremely difficult to detect through conventional surveillance, while the chemical mixtures within them induce abnormal neurological effects in users (Thong et al., 2026). This shift in medium has altered market dynamics, as promotion and transactions have migrated to digital spaces; these efforts primarily target young people using coded terminology that complicates tracking (Gao et al., 2025). A second characteristic is the capacity for structural mutation, evidenced by the emergence of new structural analogs in e-cigarette liquids substances deliberately engineered to fall outside the scope of regulated compounds (Song et al., 2025). A third characteristic is the transnational dimension of the supply chain, as demonstrated by the dismantling of production laboratories capable of generating tens of thousands of units for distribution via international logistics routes (Antara News, 2026). These factors converge in packaging operations conducted within high-rise residential buildings where oversight is limited a pattern revealed by the seizure of 1,409 cartridges and automatic pressing equipment in East Jakarta (National Police Public Relations Division, 2026).

Challenges Faced by the Police in Addressing Etomidate Misuse as a New Psychoactive Substance

The second research question focuses on current enforcement practices. Enforcement strategies to date have relied on repressive measures specifically case detection, evidence seizure, and the dismantling of production sites as illustrated by the series of operations previously described. The legal basis for these actions was strengthened when Etomidate was classified as a Schedule II narcotic; this shifted the regulatory framework from pharmaceutical controls to the regime of Law Number 35 of 2009 concerning Narcotics, thereby significantly increasing the legal pressure exerted on distribution networks. However, this normative advantage has not yet been matched by equivalent technical readiness. Law enforcement agencies still face limitations regarding testing equipment to verify the presence of substances in users' bodies, meaning that investigations rely heavily on the discovery of physical evidence (Tempo, 2026b). This weakness is structural in nature, as the classification system which lists substances individually constantly lags behind the pace at which new compounds are created (Wahyudi & Manfaluthi, 2025). Viewed through a strategic framework, the gap lies in the disparity between clearly defined objectives and inadequate resources, particularly regarding forensic laboratory capacity. The development of rapid screening methods based on mass spectrometry for seized liquids demonstrates that this obstacle can be overcome technically if capacity investment is planned systematically (Li et al., 2024).

Current Police Strategy Concept for Addressing Etomidate Misuse as a New Psychoactive Substance

Addressing the third research question, the strategic concept proposed based on the two preceding analyses rests on four mutually reinforcing components. First, strengthening legal instruments through generic scheduling that bans an entire group of chemical structures simultaneously (an approach adopted by Japan) ensures that the response does not constantly lag behind the emergence of new analogues (Yokoyama et al., 2025). Regional experience shows that explicitly reclassifying the substance under the narcotics legal regime extends the scope of enforcement to include extraterritorial dimensions (Ministry of Home Affairs Singapore, 2025). Second, establishing an inter-agency early warning system that allows laboratory findings to be rapidly translated into actionable measures, mirroring the new substance monitoring mechanisms already operating at the international level (UNODC, 2024b). Third, refining the criminal intelligence function by clearly distinguishing between raw information and intelligence the latter being an analytical product that effectively guides leadership decision-making (Carter, 2009). This component is crucial because the clandestine nature of its circulation necessitates targeting the network before distribution becomes widespread, aligning with the police mandate to maintain public security and order (Law Number 2 of 2002). Fourth, there is a need to strengthen non-penal measures specifically digital space monitoring and risk literacy initiatives tailored to the consumption patterns of the younger generation to ensure that supply reduction proceeds in tandem with a decrease in demand.

CONCLUSION

This literature review concludes that etomidate misuse in Indonesia is characterized by three interconnected features: concealment through otherwise legal consumption devices, distribution through digital platforms, and transnational supply chains that facilitate the introduction of new analogues. Regulatory developments classifying etomidate as a Schedule II narcotic have addressed the legal gap that previously constrained law enforcement actions; however, disparities in forensic detection capabilities and interagency coordination remain. Therefore, the proposed enforcement strategy should not be limited to repressive law enforcement measures but should integrate generic scheduling, an interagency early warning system, enhanced criminal intelligence capabilities, and monitoring of digital distribution channels within a cohesive framework. Further research using empirical field data is required to assess the applicability of this model at the operational level of regional police units.

At the academic level, further research should progress from literature-based analysis to empirical testing of the proposed strategic model to assess its applicability under the actual operational conditions encountered by law enforcement personnel. Field studies examining the experiences of law enforcement officers handling etomidate cases could address gaps that documentary sources cannot adequately capture, particularly those concerning operational and tactical considerations that are rarely documented in official records. Such research should also extend beyond Jakarta to determine whether the identified distribution patterns and enforcement challenges occur in other jurisdictions. Future studies could further employ interdisciplinary research designs integrating forensic toxicology, criminal law, criminology, and police management.

At the practical level, the Indonesian National Police should prioritize strengthening detection capabilities in collaboration with forensic laboratories and the Indonesian Food and Drug Authority (BPOM), including the development or procurement of validated rapid screening methods where technically feasible. Information-sharing mechanisms involving the National Narcotics Agency (BNN), the Ministry of Health, and other relevant institutions should be formalized through standardized interagency procedures rather than relying on ad hoc arrangements. Criminal intelligence analysis should also be systematically incorporated into operational decision-making. Furthermore, monitoring digital distribution channels and providing risk education for young people should complement enforcement measures so that interventions address both the supply of and demand for etomidate.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to the conduct of the research, preparation, or publication of this article.

AUTHOR CONTRIBUTION

All authors contributed to the preparation of this article. Dzul Fadlan, Surya Nita and Zulkarnein Koto, was responsible for the conceptualization of the study, data collection and analysis, interpretation of the results, and manuscript preparation. The other authors contributed to the review, editing, and final approval of the manuscript.

GENERATIVE ARTIFICIAL INTELLIGENCE USAGE STATEMENT

The authors declare that no generative artificial intelligence was used in the preparation of this article.

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