

Rethinking responses to over-the-counter drug overdose among young people in Japan: Toward a low-threshold support architecture

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Abstract: Over-the-counter (OTC) drug misuse and overdose among young people in Japan should be understood not only as a medication-safety issue but also as a public health and youth support issue situated at the intersection of psychological distress, self-harm, suicidality, help-seeking difficulties, digital environments, and fragmented care systems. Current responses, including emergency treatment for acute intoxication, psychiatric assessment, consultation services, school-based prevention, and retail regulation, remain important but often operate after crisis escalation or depend on young people's ability to present themselves through institutionally recognizable forms of help-seeking. In this Policy Forum article, we argue that Japan's response to OTC overdose should be redesigned as a low-threshold support architecture that connects early relational entry points with professional assessment, crisis escalation pathways, interagency collaboration, and safeguards for supporters. We also caution that peer support, while potentially valuable as an accessible first point of contact, should not be treated as a stand-alone intervention. Potential risks, including contagion-related concerns, exposure to distressing self-harm narratives, blurred role expectations, over-reliance on a single supporter, and safety-management failures, require explicit training, supervision, boundaries, and safeguarding protocols. We propose a three-zone framework comprising low-threshold entry points (Zone A), professional medical and interagency backup (Zone B), and sustainability infrastructure for supporters (Zone C). Rather than replacing clinical or regulatory responses, this architecture is intended to connect them with youth-accessible forms of support and to generate testable implementation models for future research.

Keywords: help-seeking, interagency collaboration, continuity of care, community support, self-harm, public health

1. Introduction

Suicide prevention among children, adolescents, and young adults remains a major policy priority in Japan. The Japanese government's annual White Paper on Suicide Countermeasures reported 529 suicides among elementary, junior high, and high school students in 2024, the highest number since national record-keeping began in 1980 (1). Against this background, over-the-counter (OTC) drug misuse and overdose have become increasingly visible as problems that intersect with youth distress, self-harm, and difficulty accessing support.

This Policy Forum article uses the term OTC drug misuse to refer broadly to the use of OTC medicines outside their intended dosage, purpose, or pattern of use. OTC drug overdose refers more specifically to ingestion of quantities that may cause physical or psychological harm, whether or not suicidal intent is present. Intentional overdose, self-harm, and suicidality overlap with, but are not identical to, OTC misuse or

overdose. We therefore avoid treating OTC overdose as synonymous with attempted suicide, while recognizing that it may occur in a context of self-harm, suicidal ideation, or acute psychological distress.

OTC overdose differs from illicit drug use because it relies on medicines embedded in ordinary daily life. The Ministry of Health, Labour and Welfare identifies cold medicines and cough suppressants as common OTC products misused by young people for psychoactive effects and discussed through social media. Clinical and epidemiological studies describe a broader range of products involved in overdose presentations (2-5). Their familiarity and legality may lower the psychological barrier to first use, and misuse can remain hidden from family members, schools, and professionals. Kyan *et al.* reported that emergency patients with OTC overdose in Japan were disproportionately young and female (2). Shimane *et al.* found that 1.5% of high school students had engaged in OTC drug abuse in the previous year, with school dissatisfaction, long periods without parents at home, and pandemic-related environmental

stress as associated factors (3). Digital environments are also part of this ecology: online question-and-answer platforms include inquiries about product choice, dosage, expected effects, anxiety, and withdrawal in relation to OTC overdose (4).

The purpose of this Policy Forum article is to integrate available epidemiological, clinical, help-seeking, regulatory, and practice-oriented evidence in order to clarify policy and practice directions for Japan. We ask why OTC overdose cannot be understood as medication management alone, where current responses have made progress and where they remain limited, and how low-threshold support, peer support, professional care, and retail regulation can be connected within a safer support architecture.

2. Why OTC drug misuse and overdose require a broader lens

OTC misuse among young people has four interrelated features. First, OTC drugs are legal, familiar, and readily available, which can make them seem less deviant and safer than illicit substances (3). Second, overdose behavior does not always represent a straightforward suicide attempt. It may reflect a wish to regulate overwhelming affect, reduce emotional pain, obtain sedation or sleep, numb affect, escape reality, communicate distress, or make suffering visible to others (4,6). These motives may overlap, and even when physical toxicity is limited, the behavior should not be trivialized as merely accidental or experimental. Third, digital environments can amplify both information access and social normalization. People with overdose intent may use online platforms to ask about drug selection, dosage, anticipated effects, and withdrawal (4). Such spaces are not simply information sources; they are social contexts in which distress may be recognized, shared, amplified, or normalized. Fourth, OTC overdose is linked with difficulty seeking help. Reviews of youth help-seeking show that shame, fear of judgment, uncertainty about whether one's suffering is serious enough, difficulty identifying where to go, and distrust of adults or services inhibit access to care (7-10). Thus, OTC overdose should be understood not only as a pharmacological event, but also as an expression of distress that emerges when words, relationships, and service access have failed.

3. Current responses in Japan: Progress, but uneven reach

Japan has made progress in recognizing OTC misuse and overdose. Emergency medicine has begun to identify OTC overdose as an important clinical issue, with multicenter evidence making the problem visible at a national clinical level (2). Prevention research has also shown that OTC drug abuse is a measurable

risk among high school students, with implications for drug and mental health education (3). National suicide policy has moved toward broadening entry points for young people, including telephone and social media consultation and understandable support information (1). Support resources also exist outside formal medical settings, including municipal consultation services, schools, private support organizations, telephone and online services, and youth drop-in spaces. The problem is therefore not that resources are absent, but that they are scattered and unevenly connected. The main achievement of current responses may be visibility rather than early reach: the problem is becoming easier to recognize after overdose has occurred, but remains difficult to address before crisis escalation.

4. Where the current system falls short

The first limitation is concentration on the acute phase. Emergency treatment is essential, but management of intoxication alone cannot adequately address loneliness, trauma, family adversity, suicidal ideation, or repeated self-harm. Stabilization of the body is necessary, but it is not sufficient. The second limitation is fragmentation across systems. OTC overdose intersects with mental health, school health, family support, welfare, and community services. When medical care, schools, municipalities, welfare agencies, pharmacies, and community organizations operate in parallel rather than in connection, support becomes discontinuous in complex cases. Barriers to help-seeking for self-harm should be understood within a broader system rather than as individual reluctance alone (8). The third limitation is that many services assume institutionally legible help-seeking. Existing systems often expect young people to present themselves using recognizable language such as "I want help" or "I want treatment". Yet young people may struggle to describe their own state, feel ashamed of asking for support, or endure alone until crisis deepens (7,9,10). A system that waits for clear disclosure will miss many of those most in need.

The fourth limitation lies in structural access to OTC drugs. Japan's drugstore environment has expanded substantially, with more than 20,000 stores nationwide and OTC drug sales reaching 1,040,057 million yen in 2025 (11). These figures do not demonstrate causality between OTC availability and overdose or suicide. They indicate that OTC products are embedded in a large retail environment that should be considered when designing prevention policies. Responses should therefore examine the access environment shaped by health policy, distribution structures, and retail practices.

The fifth limitation is that disclosure of self-harm or overdose may paradoxically narrow support. A recent Japanese practice-oriented study suggests that when

overdose or self-harm becomes known, some support settings become more hesitant to accept the young person rather than less (12). This is critical: the point at which support should expand is sometimes the point at which it contracts.

5. Regulatory and retail-environment dimensions

Policy responses to OTC overdose should include regulatory and retail-environment dimensions as well as psychosocial support. Possible measures include restrictions on quantities sold per purchase, smaller package sizes, blister packaging that slows impulsive ingestion, age-sensitive sales procedures, pharmacist or registered-seller engagement at point of sale, and monitoring of repeated or suspicious purchases across online and in-person channels (5,13-15). These measures should not be framed as punitive restrictions on young people, but as environmental safeguards that reduce immediate access to large quantities during short-lived crises.

International examples show that packaging and sales regulation can be part of overdose-prevention policy, although effects vary across settings. In the United Kingdom, legislation restricted pack sizes for paracetamol and aspirin, and subsequent research reported reductions in deaths and liver-transplant registrations related to paracetamol overdose, while also noting the need for cautious interpretation (13,14). In Australia, new paracetamol restrictions introduced from February 2025 reduced general-sale pack sizes, reduced unsupervised pharmacy pack sizes, and required larger packs to involve pharmacist supervision (15). These examples do not provide a simple template for Japan, where products, retail systems, and misuse patterns differ, but they show that product availability, packaging, and retail workflow are legitimate prevention targets.

In Japan, pharmacists and registered sellers are increasingly expected to play a gatekeeping role (5), yet this role is operationally difficult. Brief questioning at point of sale may be ineffective if young people fear reprimand, purchase from multiple retailers, use online channels, or present with ordinary symptoms. Gatekeeping requires more than refusing sales. It should include youth-sensitive communication, non-stigmatizing risk information, clear criteria for pharmacist consultation, mechanisms for repeated purchases, and pathways to low-threshold support when concern arises. Retail regulation and relational support should operate as complementary layers rather than competing approaches.

6. Why low-threshold support matters

In OTC overdose, low-threshold support is important because current systems often require too much from

young people at first contact. In this paper, it means support that does not require self-disclosure, formal help-seeking language, or readiness for treatment. It includes outreach, social media consultation, youth-friendly drop-in support, school-adjacent contact, non-stigmatizing pharmacy contact, and relational approaches that begin with connection rather than assessment.

Its significance lies not only in ease of use but in relational safety. For many young people, the first question is not what to say but whether it is safe to stay. Being able to enter a space without being judged, lectured, diagnosed, or immediately disciplined may make further engagement possible. Online help may be valued because it is private, less stigmatizing, and easier to access than conventional services (10). Thus, the key issue is not only what support contains but how support begins. Needing support and being able to walk into a formal system are not the same thing.

7. Peer support: Potential contributions, risks, and safeguards

Peer support has been conceptualized as support grounded in mutuality, equality, and shared experience (16). In youth mental health settings, it may foster connection, hope, and engagement, although implementation models and organizational supports vary considerably (17-19). Its relevance to OTC overdose should therefore be framed as a plausible and practice-informed contribution, not as a proven stand-alone intervention for preventing repeated overdose or suicide.

A Japanese practice-oriented study describes how peer supporters involved in street outreach, social media consultation, and youth place-making deliberately reduce the institutional tone of "consultation" or "support" (12). Their strategies include using everyday language, aligning with youth culture through topics such as makeup or nails, avoiding excessive formality, and not pressing immediately for disclosure of overdose. The aim is not to deny risk but to create a relationship in which the young person can remain without feeling judged. These practices show that low-threshold support is not only about where support is offered, but how it is embodied.

At the same time, the evidence base remains limited. Much of the literature on peer support for self-harm and youth mental health is qualitative, heterogeneous, practice-oriented, or indirect. It would therefore be inappropriate to conclude that peer support by itself improves clinical outcomes, prevents suicide, or reduces repeated overdose. A more cautious interpretation is that peer support may facilitate earlier engagement and relational continuity when embedded within supervised systems that provide clinical assessment, crisis intervention, and sustained aftercare.

Potential harms must also be addressed. Peer support around self-harm and overdose may create risks such as contagion-related concerns when methods or experiences are shared without boundaries; exposure to distressing self-harm narratives; blurred role expectations when supporters are treated as clinicians, friends, or crisis responders; over-reliance on a single peer relationship; and delayed professional escalation when supporters hesitate to involve professionals out of fear of damaging trust (20,21). These risks do not negate peer support, but they make governance indispensable.

Safeguards should include role descriptions, training in suicide and self-harm risk recognition, protocols for acute intoxication and suicidal escalation, supervision by mental health or public health professionals, documentation rules, privacy and information-sharing procedures, debriefing after high-risk contacts, and explicit limits on availability (17,20,21). Confidentiality

should be relationally important but not absolute: when there is imminent danger, acute intoxication, abuse, or serious safeguarding concern, supporters need agreed procedures for involving emergency, clinical, welfare, or child-protection services. Peer support is safest when young people know both that they will not be judged and that risk will not be held by one unsupported person.

8. Toward system redesign: A policy and practice framework

What is needed is not separation of low-threshold support, professional care, and retail regulation, but their reconstruction as one connected support architecture. Figure 1 presents a proposed policy and practice framework rather than an evidence-summary diagram. It builds conceptually on the authors' previously published practice-oriented study (12),

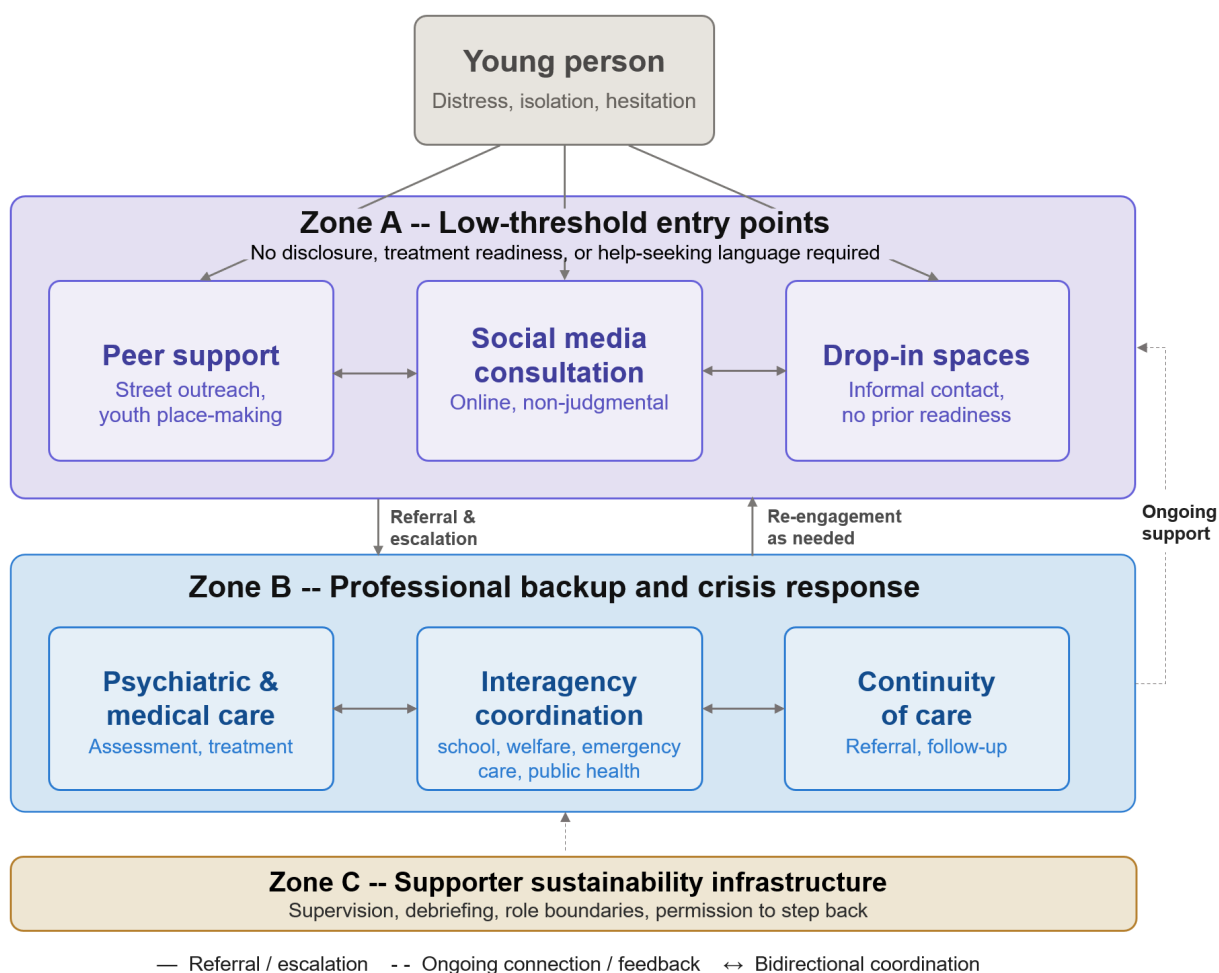


Figure 1. Proposed connected support architecture for OTC overdose among young people. Zone A represents low-threshold entry points focusing on relational safety and early contact, including social media consultation, outreach, youth drop-in spaces, school-adjacent support, and non-stigmatizing pharmacy or retail contact. Zone B represents professional medical and interagency backup, including emergency care, psychiatry, school health, public health, welfare, and child and family services. Zone C represents sustainability infrastructure for supporters, including training, supervision, debriefing, role boundaries, funding, and organizational accountability. Solid arrows indicate referral and escalation pathways when risk increases; dashed and bidirectional arrows indicate continuing coordination, return pathways after crisis care, and feedback for system improvement.

while extending those findings into a broader policy and practice architecture. It is organized into three functional zones.

Zone A comprises low-threshold entry points that should be delivered primarily by non-governmental organizations, private support groups, community-based youth services, and other non-clinical actors: social media consultation, street outreach, school-adjacent counseling, youth drop-in spaces, community organizations, and non-stigmatizing pharmacy or drugstore contact. In Zone A, the main tasks are relational safety, recognition of concern, and maintenance of contact. Zone B encompasses professional medical and interagency backup, including emergency departments, psychiatry, primary care, school health staff, public health nurses, municipal welfare services, child and family services, and addiction or youth mental health services. Escalation should occur when there are signs of acute intoxication, rapidly intensifying suicidal ideation, loss of consciousness or medical danger, repeated overdose in a short period, abuse or exploitation, or inability to maintain safety in the current setting. These thresholds should be written into protocols rather than left to individual intuition.

Zone C represents sustainability infrastructure: training, reflective supervision, case conferences, debriefing, workload limits, role boundaries, funding, and organizational accountability. Supporters should not be expected to absorb repeated exposure to self-harm narratives, online abuse, or life-threatening crises without institutional protection. Movement between Zones A, B, and C should be bidirectional rather than linear. A young person may first encounter support through an SNS message or pharmacy contact in Zone A, require same-day medical assessment through Zone B after an overdose, and later return to a drop-in space or online peer contact in Zone A while professional follow-up continues. Zone C supports this movement by ensuring supervision, lawful and proportionate information-sharing, and organizational learning from repeated breakdowns in care. The goal is not to transfer the young person from one sector to another and end contact, but to prevent every transition from becoming another rupture. Interagency collaboration must therefore be operational rather than aspirational. Emergency departments, psychiatry, schools, public health, welfare services, pharmacies, and community organizations may all act in good faith, but without agreed pathways for communication, role allocation, and information-sharing. Young people can move between services without ever becoming securely connected to any of them.

9. Implications for policy, practice, and research

The policy implication is that OTC overdose among young people should be positioned within broader frameworks of youth suicide prevention, mental

health, isolation, school health, and retail safety, not only drug misuse. The direction already signaled in national suicide policy should be more explicitly connected to overdose-responsive pathways (1). The practice implication is that some young people need a relationship before they can tolerate assessment. Delayed or hesitant help-seeking should not be read simply as resistance or immaturity. It may reflect shame, distrust, difficulty putting distress into words, or prior traumatic experiences. Risk work has to be embedded within acceptable human contact.

The regulatory implication is that access controls should be designed with young people's help-seeking realities in mind. Smaller package sizes, quantity limits, pharmacist involvement, and online-sales safeguards may reduce immediate access to large quantities, but they will be incomplete if they only block purchase without opening a route to support. A young person prevented from buying a large quantity of OTC medicines still needs somewhere to go, someone to contact, and a system that does not punish disclosure.

The research implication is that the field should move beyond asking whether OTC overdose exists. Epidemiological studies have established its presence, clinical studies have shown its relevance, and practice-oriented work has begun to describe both possibilities and fragilities (2,3,12). Systematic reviews suggest that youth peer support may enhance connection, engagement, and hope when implemented with role clarity and organizational support, while peer support and self-help approaches for self-harm require attention to safety, boundaries, and unintended harms (17-21). Broader review evidence indicates that self-harm among young people is shaped by interacting risk and protective factors and that engagement with web-based support depends on accessibility and perceived relevance (22,23). A recent Japanese case series of vulnerable runaway girls transported to emergency care, often following OTC overdose, further underscores the intersection of repeated self-harm, school absenteeism, and insufficient support systems (24).

The next task is to evaluate implementation models that connect low-threshold support with professional care and retail safeguards. Outcomes should include earlier help-seeking, linkage to care, continuity after emergency presentation, repeated overdose, suicidal ideation, young people's perceived safety, and supporter burden. Studies should also examine feasibility, fidelity, cost, training requirements, and unintended harms. Until such evidence accumulates, the proposed architecture should be understood as a policy and practice framework for implementation and evaluation, not as an already validated intervention.

10. Conclusions

OTC drug misuse and overdose among young people

in Japan cannot be explained by availability alone. They emerge at the intersection of isolation, distress, difficulty seeking help, online environments, retail access, and weakly connected support systems. Current responses have improved visibility, but they have not yet become fully reachable, durable, or non-excluding for the young people most at risk. The task ahead is to connect relational strengths of low-threshold support with safety, accountability, and continuity of professional care and preventive potential of retail-environment safeguards. Peer support matters in this architecture not because it can do everything, but because it may become the first place where a young person is able to remain, speak, and be linked onward. Policy and practice must ensure that this first contact becomes a connected path toward support, not another break in care.

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