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Mapping Paramedic Inclusion in Canada's Illicit Drug Strategy Landscape: A Critical Realist-Informed Policy Analysis and Typology

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Abstract

Background

Paramedics play an important role in caring for people who use drugs and have growing potential to contribute to integrated and harm reducing models of care. However, how paramedic practice is situated within strategic drug policy frameworks remains unclear. Limited or inconsistent policy recognition may constrain their role to emergency response and restrict opportunities for innovation and system reform. This study examines how paramedics are positioned within Canada's drug policy framework as a first step toward understanding how policy enables or constrains their evolving role.

Methods

A critical realist-informed policy analysis was conducted across 45 Canadian drug policy documents, including 33 federal and 12 provincial policies. Documents were systematically coded to identify references to paramedics, including explicit naming, indirect inclusion, or absence. A typology was developed to capture these patterns of professional inclusion across the policy landscape.

Results

Paramedic inclusion was uneven across policy levels. Federally, paramedics were explicitly named in Section 56(1) exemption letters related to controlled substances but were largely absent from broader strategic drug policies, where references were typically indirect or non-existent. Provincial policies demonstrated more consistent inclusion, with most documents explicitly or indirectly referencing paramedics. Where included, paramedics were primarily framed within emergency response and regulatory contexts, with limited recognition of their expanding role in preventative and integrated system-level functions.

Conclusions

Paramedic inclusion in Canadian drug policy is fragmented and context-specific, with strategic recognition at the federal level remaining limited. The typology provides a practical tool for assessing professional positioning in policy frameworks and establishes a foundation for subsequent analysis. Improved policy alignment may help activate underutilized paramedic capacity in integrated and harm preventing models of care.

Introduction

Paramedics are increasingly recognized as influential actors in drug-related health responses, yet their role within Canada's national drug strategy remains poorly defined. While harm-reduction-oriented models of paramedic care continue to evolve, it is unclear how federal and provincial policies enable or constrain these practices. Because policy determines whether innovative models remain small and fragmented or become integrated, scalable components of the health system [1], understanding this

landscape is critical. This analysis examines how paramedics are positioned within Canada's federal and British Columbia (BC) drug policy landscape, and outlines implications for practice, implementation, and reform.

Background

Canada continues to face an escalating drug toxicity crisis, with BC representing one of the most severely affected provinces [2, 3]. Since being declared a public health emergency in Canada in 2016, over 50,000 people have lost their lives to illicit drug toxicity, outpacing all non-natural causes of death for those aged 20–49 [4]. British Columbia accounts for nearly one third of all drug toxicity deaths and has led the country in implementing novel harm reduction initiatives such as supervised consumption sites, safer supply initiatives, and decriminalization trials [5–9]. Despite some promising initiatives, political opposition has constrained harm reduction scale-up. British Columbia's decriminalization pilot, launched in January 2023, was significantly modified in 2024 following public backlash and political pressure, with prohibitions on public consumption reinstated. In April 2025, the federal government announced that the exemption would not be renewed beyond its expiry, effectively discontinuing the pilot in 2026. This political environment, combined with an increasingly toxic illicit drug supply and insufficient harm reduction infrastructure, has kept the system in reactive mode. As such, drug-poisoning deaths remain persistently high [10, 11].

Why Paramedicine

Due to the positionality of paramedics (available 24/7, decentralized, and mobile) they are increasingly recognized as being well situated to influence the functioning of integrated healthcare systems [12, 13]. Paramedic systems have historically focused on emergency response to drug-related events such as poisoning or acute withdrawal, but contemporary models increasingly include preventive mechanisms such as take-home naloxone programs and paramedic-initiated referral pathways [14–17]. This integration into the rest of the health system is particularly relevant for people who use drugs, who regularly report unmet needs following conveyance to the emergency department (e.g., feelings of neglect, inadequate pain and withdrawal management, and stigmatizing experiences) [18]. This means that paramedics may be the first and only point of contact for people who use drugs who choose not to be conveyed to hospital [14]. This positionality, described in Network Theory as “centrality”, makes them influential actors within the system, which if leveraged appropriately and in an integrated way has the potential to decrease fragmentation and contribute to enhanced access and flow within the system [19]. Yet, despite this unique positioning at the interface between crisis response and community care, it remains unclear how paramedicine is included in Canada’s strategic drug policy landscape, and consequently, how policy enables or constrains their ability to provide these types of alternative care models.

Explicit naming within policy is a well-established mechanism through which professions gain visibility, authority, and integration within health systems. When groups are referenced only indirectly (or omitted entirely) their role in system-wide initiatives becomes unclear, which often results in their exclusion from program development, care pathways, and upstream strategies [20]. The extent to which inclusion of paramedicine within Canada's drug strategy inhibits or delays the uptake of paramedic-led preventative models of care is also not well established. As the profession shifts toward upstream models of care such as community paramedicine, social prescribing, and system navigation, implementation and sustainability barriers have become more visible at the policy and system level [21–24].

In public health scholarship, "upstream" approaches address social and structural determinants of health rather than proximate causes, intervening earlier along risk trajectories to prevent harm before crisis occurs [25–27]. While paramedics do not directly control these determinants, their positioning within health and emergency care systems places them at a critical interface where elevated risk can be identified and upstream-oriented principles such as early harm prevention and linkage to community-based services can be enacted. Integrated and interdisciplinary approaches are critical, as people who use drugs routinely intersect with multiple systems including health care, emergency services, housing, and social supports [28]. Fragmentation produces gaps and missed opportunities, while integrated models improve continuity and ensure consistent support across the care continuum [29–31].

Why Policy

Policy serves as a critical systems-level lever in shaping how health and social services respond to people who use drugs [32]. It defines the parameters of what is possible within programs and professions by directing resources, authorizing scopes of practice, and signaling governmental priorities [33, 34]. In the context of the drug toxicity crisis, policy decisions determine whether responses remain reactive and fragmented or evolve toward integrated, preventive, and harm-reduction-oriented systems of care [35]. By focusing on policy, we acknowledge that in order for programs to be successful, the system must support them. In doing so, we also acknowledge that policies do not exist in a vacuum. Instead, they are products of the cultural and ideological contexts in which they are produced, including societal beliefs and shifting public narratives about drug use and health. These forces form a complex landscape that service leaders must navigate as they translate policy intent into practice through program design and implementation frameworks.

Context

This study focused on two key policy jurisdictions: the Canadian federal level and the province of British Columbia. In Canada, federal policies set national legal, strategic, and regulatory frameworks. British Columbia, meanwhile, has led the country in harm reduction initiatives and offers a rich case for provincial-level policy analysis. Directives at the federal level do not necessarily translate to provincial implementation. For example, while paramedics in BC were granted federal authority to administer

buprenorphine in 2023, implementation has not occurred without corresponding provincial legislative changes. This demonstrates that policy levers at both levels must be activated to enact reform.

Paradigmatic Approach

Our approach to this problem has been conceptualized using a networked ecological systems-thinking (NEST) model, which signals a need for strengthened integration by recognizing that drug-related harms arise from dynamic interactions across individual, community, organizational, societal, and policy levels rather than from isolated factors [19].

Ecological systems theories highlight how macro-level mechanisms (policy, legislation, stigma) enable or constrain upstream care models, while networked approaches examine how relationships and information flows shape system integration [19, 36, 37]. These perspectives point us toward the macrosystem, where policy becomes a key mechanism shaping what upstream and integrated responses are possible. We adopt a critical realist approach because it enables us to examine how networked interactions generate underlying mechanisms not directly observable in policy texts, aligning with NEST to explain how structural, relational, and contextual forces shape care for people who use drugs. As illustrated in Fig. 1, policy and governance function as structural determinants that shape the conditions under which professional practice occurs across system levels.

Following Stevens [38], we avoid "flat ontologies" that neglect underlying causal structures by treating policy texts as empirical traces of deeper mechanisms. We identify recurring patterns of inclusion as demi-regularities that signal underlying structural influences. We also treat absences as analytically meaningful rather than accidental. From these patterns, we develop a typology that will inform the subsequent realist synthesis, examining how specific policy contexts trigger mechanisms that shape paramedic roles and outcomes [38].

Methods

To address our research questions, we conducted a critical realist-informed policy analysis. This approach is grounded in critical realist philosophy [39, 40], which holds that observable patterns are empirical traces of deeper generative mechanisms not directly visible in texts. Operationally, this phase employed a realist-informed document analysis consistent with realist synthesis principles [41], adapted to map empirical patterns of inclusion as the foundational step for CMO development in Phase 2. This publication represents Phase 1 of a broader realist synthesis examining how Canadian drug policy shapes paramedic practice. Phase 1, reported here, does not produce CMOs. Rather, it maps empirical patterns of paramedic inclusion across governance-level policy documents. Theorizing why those patterns exist requires first establishing what they are, making this mapping a necessary precondition for CMO development and a contribution in its own right. The findings provide the empirical foundation for the realist synthesis in Phase 2. The phased structure of this study is illustrated in Fig. 2.

A critical realist informed approach, previously used in drug and social policy research, provides a structured way to explore how observed patterns in texts reflect underlying institutional arrangements. Using this framework, we systematically reviewed a policy database, 12 related government websites, and conducted a targeted Google search, identifying 286 records for screening. Of these, 164 were identified through Overton and 122 through targeted website searches, with 33 federal and 12 provincial documents ultimately meeting inclusion criteria. This approach was selected to identify and interpret how policy structures and patterns of inclusion reflect the contexts that policy instruments respond to, the mechanisms through which they are intended to operate, and the outcomes they articulate as goals. This analysis is confined to what is stated within policy texts rather than evaluating real-world implementation or outcomes. Rather than testing causal relationships, this phase focused on mapping observable patterns of explicit, indirect, and absent inclusion as an initial step toward developing theory that will be explored in subsequent critical realist informed analysis [41].

Policy documents were coded to capture the empirical level of observation; specifically, patterns of paramedic inclusion within governance-level frameworks. We viewed these documents as empirical artefacts that record what is articulated and observable at the level of governance, while recognizing that observable textual patterns are shaped by deeper institutional and structural mechanisms that are not directly visible [39, 40]. Accordingly, patterns of explicit, indirect, and absent inclusion were analyzed as recurring empirical features suggesting the operation of underlying generative mechanisms such as jurisdictional boundaries, professional hierarchies, or governance structures [40, 42, 43]. Consistent with Sayer's [40] argument that absences can be causally significant, omissions in policy texts were treated as meaningful data rather than neutral gaps.

We then applied a structured coding framework in ATLAS.ti to classify each reference to paramedics according to a typology of explicit inclusion (paramedics named directly), indirect inclusion (paramedics implied through broader categories such as “system of care” or “health providers”), or absence (no reference, explicit or implied). During coding, absences were further interrogated to distinguish between expected (structural) and unexpected (meaningful) omissions. Documents were also coded as explicit inclusion when a definition of “health services” specifically references the inclusion of paramedics within that definition. Coding rules were reviewed throughout, and edge cases were discussed until consensus was reached. The typology used to classify patterns of paramedic inclusion is presented in Fig. 3.

Scoping the Literature

We scoped policy documents (grey literature) at the Canadian federal and BC provincial levels, as these represent the principal sites where authority over drug policy is exercised [44].

Canadian and BC government portals, legislative databases, and a policy-specific database were scoped to identify policy documents that met a governance threshold: high-level directives shaping institutional responsibilities, authorizations, and standards [45, 46].

The Canadian Drugs and Substances Strategy (CDSS) oriented our search strategy, defining policy domains most likely to influence care for people who use drugs: legislative controls, strategic frameworks, harm reduction initiatives, and criminal justice measures. Documents from 2016 onwards were included, reflecting a turning point in drug policy, and the year BC declared a public health emergency in response to rising drug toxicity deaths.

We excluded provincial documents from other jurisdictions and implementation-level documents (clinical guidelines, toolkits, advisory reports). The focus remained on governance-level policy where generative mechanisms are most likely to operate, providing a foundation for understanding how system-level authorizations condition practice [41].

Searching Processes

We conducted a structured search for governance-level policy documents using: (1) targeted site searches on government domains; (2) advanced web searches; (3) snowballing from reference lists; and (4) Overton, a policy database. Searches were executed iteratively following realist principles of progressive focusing.

To enhance rigor, we employed: information scientist review of the search strategy; provenance checks (issuer verification, version control); dual verification of inclusion decisions; and complete audit trails via a research journal. In line with established criteria for trustworthiness [47], we addressed credibility, dependability, confirmability, and transferability through transparent documentation and systematic verification processes.

Results

Corpus Overview

Out of 286 screened policy documents, 45 total documents met inclusion criteria for the review. Of the 45 documents, 33 federal and 12 provincial (British Columbia), as detailed in the PRISMA flow diagram (Fig. 4).

As shown in Table 1, the final corpus encompassed three primary categories of governance-level policy; Legislation and Acts (n = 5), Regulations and Exemptions (n = 27), and Strategic Frameworks and Service Plans (n = 12).

Table 1
Corpus composition by document type and jurisdiction

Type of Document	Federal (n = 33)	Provincial (n = 12)
Legislation / Acts	3	2
Regulations / Exemptions	25	2
Strategic Frameworks / Service Plans	5	8

Coding Distribution

Across the 45 documents, we coded 562 text segments. Each segment was classified using our three-category typology: explicit inclusion (paramedics named directly), indirect inclusion (paramedics implied through broader categories), or absence (no reference). Federal documents (n = 33) yielded 142 coded segments, while provincial documents (n = 12) yielded 420 coded segments.

Federal Policies

Among the 33 federal documents included, 19 were coded as explicit inclusion, 4 as indirect inclusion, and 10 as absent, as detailed in Table 2. Explicit inclusion was concentrated in Section 56(1) exemption letters (see below: D13–D31), where paramedics were named directly in relation to their professional ability to handle and administer controlled substances. Indirect inclusion occurred in four higher-level documents, including the Controlled Drugs and Substances Act (D12), the Canadian Drugs and Substances Strategy (D34), the Good Samaritan Drug Overdose Act (D35), and the Letter of Requirements regarding Decriminalization (D36). Absence was observed in 10 documents, primarily exemption and regulatory instruments that addressed other practitioner groups without referencing paramedics (D32–D33, D37–D44).

Table 2
Federal Policy Document Paramedic Representation Typology

Document #	Federal Policy Document Name	Typology
D12	Controlled Drugs and Substances Act (CDSA)	Indirect Inclusion
D13	Section 56(1) Exemption - Alberta Ambulance Operators	Explicit Inclusion
D14	Section 56(1) Exemption - Alberta Paramedics	Explicit Inclusion
D15	Section 56(1) Exemption - British Columbia Paramedics	Explicit Inclusion
D16	Section 56(1) Exemption - British Columbia Ambulance Administrators	Explicit Inclusion
D17	Section 56(1) Exemption - Manitoba Land and Air Medical Directors	Explicit Inclusion
D18	Section 56(1) Exemption - Manitoba Paramedics and Technicians	Explicit Inclusion
D19	Section 56(1) Exemption - Saskatchewan Ambulance Operators	Explicit Inclusion
D20	Section 56(1) Exemption - Saskatchewan Paramedics	Explicit Inclusion
D21	Section 56(1) Exemption - Ontario Ambulance Operators	Explicit Inclusion
D22	Section 56(1) Exemption - Ontario Paramedics	Explicit Inclusion
D23	Section 56(1) Exemption - Prince Edward Island Ambulance Administrators	Explicit Inclusion
D24	Section 56(1) Exemption - Prince Edward Island Paramedics	Explicit Inclusion
D25	Section 56(1) Exemption - Nova Scotia Emergency Health Service Administrators	Explicit Inclusion
D26	Section 56(1) Exemption - Nova Scotia Paramedics	Explicit Inclusion
D27	Section 56(1) Exemption - Nova Scotia Emergency Health Service Operators	Explicit Inclusion
D28	Section 56(1) Exemption - Quebec Paramedics	Explicit Inclusion

Document #	Federal Policy Document Name	Typology
D29	Section 56(1) Exemption - Newfoundland and Labrador Ambulance Operators	Explicit Inclusion
D30	Section 56(1) Exemption - New Brunswick Ambulance Administrators	Explicit Inclusion
D31	Section 56(1) Exemption - New Brunswick Paramedics	Explicit Inclusion
D32	Section 56(1) Exemption – Urgent Public Health Need Sites	Absent
D33	Section 56(1) Exemption – Small Possessions of Drugs	Absent
D34	Canadian Drugs and Substances Strategy (CDSS)	Indirect Inclusion
D35	Good Samaritan Drug Overdose Act	Indirect Inclusion
D36	Letter of Requirements to Support BC's Exemption	Indirect Inclusion
D37	Section 56(1) Exemption - Framework for Designating Additional Classes of Practitioners	Absent
D38	Section 56(1) Exemption – Practitioners to Administer Designated Drugs	Absent
D39	Section 56(1) Exemption – Prescribing/Providing CTS	Absent
D40	Section 56(1) Exemption – Transportation of CTS	Absent
D41	Section 56(1) Exemption – Supply to Community Health Facility	Absent
D42	Section 56(1) Exemptions - Supporting Information	Absent
D43	Section 56(1) Exemption – Nurses Providing Care in Community Facilities	Absent
D44	Section 56(1) Exemption – Practitioners Destroying Unserviceable Stock	Absent

Provincial Policies in BC

Provincial policies in British Columbia demonstrate a more balanced distribution across inclusion types compared to federal policies. Among the 12 British Columbia provincial documents, as detailed in Table 3, 9 explicitly included paramedics (75%) 1 indirectly included paramedics (8.3%), and 2 omitted paramedics (16.7%). Explicit inclusion occurred across both legislative/regulatory instruments and provincial strategic frameworks, while indirect inclusion was limited to a single high-level provincial strategy.

Table 3
Provincial Policy Document Paramedic Representation Typology

Document #	Provincial (BC) Policy Document Name	Typology
D1	BC Mental Health and Substance Use Strategy 2017–2020	Explicit Inclusion
D2	A Path Forward: BC First Nations Mental Wellness and Substance Use Plan	Explicit Inclusion
D3	Adult BC Substance Use System of Care Framework	Explicit Inclusion
D4	BC Population & Public Health Framework	Explicit Inclusion
D5	Emergency Medical Assistants Regulation (EMA Regulation)	Explicit Inclusion
D6	Emergency Health Services Act (EHS Act)	Explicit Inclusion
D7	Bill 34: Restricting Public Consumption of Illegal Substances Act	Absent
D8	Overview: Provincial Overdose Emergency Response	Explicit Inclusion
D9	Ministry of Mental Health & Addictions Service Plan	Absent
D10	Pathway to Hope: Roadmap for Making Mental Health and Addictions Care Better for People in BC	Indirect Inclusion
D11	BC Centre for Disease Control (BCCDC) Harm Reduction Strategies and Services Policy	Explicit Inclusion
D45	BC Health Human Resources Strategy	Explicit Inclusion

Explicit inclusion

Explicit inclusion of paramedics was identified in 28 of the included documents (19 federal and 9 provincial). At the federal level, explicit references were concentrated in Section 56(1) exemption letters, where paramedics were named directly in relation to the possession, administration, and transportation of controlled substances for emergency and community-based care. These exemptions specified that 'paramedics are exempted for medical purposes' and granted 'the authority to possess, transport and administer controlled substances' for specific paramedic categories (e.g., Advanced Care, Critical Care, Primary Care), with similar language appearing across provincial exemption letters (D13-31).

At the provincial level, explicit references occurred across a mix of strategies, frameworks, and legislative instruments, including the BC MHSU Strategy 2017–2020 (“paramedics”, “first responders”), the Adult BC Substance Use Framework (“crisis response services”, “frontline workers”, “EMS”), the BC

Population and Public Health Framework (“ambulance services”), the Emergency Medical Assistants Regulation, and the Emergency Health Services Act. In these cases, paramedics were referred to directly as a regulated health profession or as designated practitioners. For example, BC's Mental Health and Substance Use Strategy explicitly positioned paramedics within crisis response infrastructure, stating that 'the Joint Task Force on Overdose Response is working with medical health officers, health authorities, emergency room staff, paramedics and other first responders' (D1).

Indirect inclusion

Paramedics were indirectly included in 4 federal documents and 1 provincial document. At the federal level, these references appeared in higher-level governance frameworks such as the Canadian Drugs and Substances Strategy, the Controlled Drugs and Substances Act, the Good Samaritan Drug Overdose Act, and the Letter of Requirements regarding decriminalization. Indirect references occurred through broad categories such as “integrated health system” “systems of care,” “health system readiness,” or “healthcare providers,” all of which reasonably encompass paramedics without explicitly naming the profession. For instance, the Canadian Drugs and Substances Strategy referenced *'law enforcement and other first responders*' in relation to overdose monitoring, and promoted *'equitable access to a continuum of health services and supports*' for people who use substances, both requiring interpretive inference that paramedics fall within these categories despite no explicit mention (D34).

Similarly, at the provincial level, BC’s Pathway to Hope: A roadmap for making mental health and addictions care better for people in British Columbia referenced *'overdose emergency response, including community-based harm reduction services*' without explicitly naming paramedic services despite their central role in emergency overdose response (D10).

Absent

Absence was recorded in 10 federal documents and 2 provincial documents (n = 12 total). At the federal level, all absences occurred in exemptions and regulatory documents that applied exclusively to other practitioner groups, such as physicians, nurse practitioners, dentists, or pharmacists. Of these, all were classified as structural absences, where references to paramedics would not reasonably be expected.

At the provincial level in BC, absences were recorded in two documents: Bill 34, *Restricting Public Consumption of Illegal Substances Act* (structural absence), and the *Ministry of Mental Health and Addictions Service Plan* (meaningful absence), neither of which referenced paramedics directly or indirectly. For instance, the Ministry of Mental Health and Addictions Service Plan detailed crisis response strategies, service integration priorities, and overdose emergency response measures without any reference to paramedic services, despite their established role in these areas (D9).

Discussion

Using a critical realist-informed approach, this analysis treated policy texts as empirical traces of deeper structures to examine how paramedics are positioned within federal and provincial drug policy. The

discussion proceeds in three parts: first, interpreting the patterns of inclusion and absence identified across the corpus; second, examining the structural and institutional mechanisms that drive those patterns; and third, considering the implications for policy design and paramedic role development across the continuum of care. The analysis categorized three patterns of inclusion: explicit inclusion, indirect inclusion, and absence (structural and meaningful). In some cases, paramedics were explicitly positioned as essential contributors to emergency response. Other documents referred to paramedics indirectly, grouping them under broader categories such as “healthcare providers,” leaving their roles more ambiguous. In documents where paramedics were absent (n = 12), the majority reflected structural absences in which paramedics would not be reasonably expected to appear, while a smaller number constituted meaningful absences, where their exclusion from major strategies or frameworks constituted a missed opportunity to leverage their centrality as actors [19].

The distribution of federal and provincial documents across the typology reflects differences in policy function, with federal instruments primarily focused on regulatory authorization and compliance, and provincial documents more commonly articulated as strategic and service-oriented frameworks, consistent with their respective roles within Canada’s multi-level policy system [48]. The uneven distribution of codes within the typology reflects both the concentrated nature of federal regulatory policies and the broader descriptive content of provincial strategies. These patterns are understood here as demi-regularities: recurring tendencies that are neither universal laws nor coincidences, but empirical signals of underlying structural forces operating across the policy landscape. The findings also highlight how paramedic inclusion reflects the hierarchy of policy instruments [49]. In Canada, paramedics are explicitly included in regulatory instruments (e.g., Section 56(1) exemptions) where their scope of practice and authority to handle controlled substances must be clearly defined. In contrast, their presence in broader strategic frameworks is much more limited and often indirect. In British Columbia, this limited strategic visibility is mirrored in the province’s regulatory architecture. Unlike most health professions governed under the Health Professions Act (HPA), paramedics (classified legally as Emergency Medical Assistants) are regulated under the Emergency Health Services Act and its accompanying Emergency Medical Assistants Regulation. This parallel framework means paramedics are licensed through the Emergency Medical Assistants Licensing Board rather than a professional college. While they are functionally recognized as a regulated health profession, their exclusion from the HPA reflects a historical separation of emergency medical services from mainstream health governance [50]. The result is a structural distinction that reinforces their marginal position within broader health policy frameworks, limiting their visibility in strategic health planning and interprofessional integration efforts. Within a NEST framing, this regulatory separation operates as a macrosystem-level constraint by shaping the relational and informational flows between paramedicine and other health professions, limiting the integration that coordinated responses to drug-related harms require. Notably, the patterns identified in this analysis are not politically neutral. Federal drug policy documents, while produced under consistent political leadership throughout the period examined, reflect the values and ideological commitments of the governing party and shifts within its policy agenda over time. These ideological forces operate as mechanisms that shape which professions are named, which are omitted, and how

harm reduction is framed at the governance level. At the provincial level, BC's leadership in harm reduction reflects a particular political orientation that has enabled more explicit recognition of paramedics within strategic frameworks. This context is not necessarily generalisable to provinces with different political priorities, where the patterns of inclusion identified here may look quite different. This imbalance is relevant because explicit naming within policy is one of the primary mechanisms through which professions gain legitimacy, jurisdictional authority, and visibility in broader systems of care.

When a profession is directly referenced, it is positioned as a recognized actor in decision-making; when it is only indirectly referenced or absent, its role becomes ambiguous, which can reinforce marginalization and limit opportunities for upstream involvement [20, 51]. This dynamic aligns with scholarship on professional boundary-work [43], which demonstrates that policies activate mechanisms determining which actors gain authority within systems. From a critical realist perspective, these mechanisms are not visible on the surface of the text; they must be inferred from the patterns, including the absences, that the analysis surfaces. Treating absences as analytically meaningful, rather than incidental, is central to this approach and resists the "flat ontologies" that would read policy only for what is explicitly present. In this study, this concept is used to interpret how patterns of paramedic inclusion reflect underlying structural forces shaping their institutional positioning within Canada’s drug policy landscape. These findings resonate with earlier scholarship describing the uncertain positioning of paramedics within health systems, where they are often characterized as “emerging professionals” or positioned at the periphery of mainstream policy discussions [52–54]. Similar patterns have been observed in professions such as nursing and social work, where indirect references or omissions in policy texts have contributed to limited recognition of their contributions and constrained their roles in system-level initiatives [55–57]. This reflects a broader context of medical dominance, in which the authority of health professions is historically structured in relation to medicine. Scholarship in this area shows that professions gain or lose legitimacy and authority through the ways they are positioned in policy [20, 51]. The patterns identified in this review demonstrate that paramedicine is subject to the same structural forces: when paramedics are explicitly named, their authority and contribution are legitimized; when they are only indirectly referenced or absent, their role becomes uncertain, and their potential contributions remain systemically overlooked.

This analysis extends the existing literature by mapping paramedic inclusion across multiple policy domains and showing how different levels of recognition shape their visibility and influence within the wider health system. Importantly, it highlights that these patterns are not incidental but reflect deeper professional hierarchies and power relations embedded in Canadian health governance. Recognizing this is not simply a matter of professional advocacy; it has implications for system efficiency and for the design of integrated models of care that center the needs of people who use drugs. Strategies to address these imbalances must therefore avoid reproducing hierarchical or protectionist dynamics and instead contribute to more collaborative and integrated models of care that leverage the unique positionality of paramedics within harm-reduction oriented and integrated responses.

A key early observation is that where paramedics are explicitly included, it is almost exclusively in the context of emergency response; drug poisoning, acute care, or other emergency medical services. This narrow framing risks locking the profession into acute, reactive models of care and contributes to the continued invisibility of paramedics within public-health and preventive policy spaces. Rather than simply limiting the development of new roles, this absence reinforces a policy narrative in which paramedics are positioned almost exclusively as emergency responders. As a result, despite their centrality, their potential contributions to community-based interventions and upstream models of care remain largely unacknowledged within the broader drug strategy landscape. These findings point to a broader policy gap: current frameworks capture what paramedics do in emergencies but largely fail to anticipate what they could contribute across the continuum of care. What paramedics could do is an important revelation, as it currently sits in tension with the traditional, responsive framing of their role [14]. The buprenorphine authorization for paramedics illustrates this tension precisely. Within a critical realist framework, authorization represents policy as intended, but without a provincial drug strategy that explicitly activates the conditions for implementation, the underlying mechanism remains inert. The context, in this case, the absence of strategic alignment across allied health agencies, determines whether the mechanism fires and whether the intended outcomes are realized. This illustrates a broader point for policy architects: permissions (e.g., policy as intended) without strategic alignment (e.g., policy as enacted) may remain inert.

Finally, the typology underscores the value proposition of paramedics within the health system, viewed through the lens of patient outcomes [24, 58, 59]. Research demonstrates that integrated care frameworks improve continuity and reduce service gaps for people with complex health needs [29, 31]. Policy inclusion is therefore not a matter of professional recognition alone; it is a precondition for realizing the patient outcomes that integrated models of care are designed to produce. Recognizing these patterns in this context is crucial as they determine whether patients encounter paramedics only in acute emergencies, or whether they also benefit from their potential role in other capacities throughout the patient care journey. The true value proposition lies in expanding policy inclusion so that patients receive not just reactive support in moments of crisis, but proactive, integrated care across the continuum.

The typology developed in this review was created specifically to identify and categorize how paramedics appear across policy documents. Its application in this analysis demonstrates its utility for comparative work across jurisdictions, policy types, and timeframes. Beyond paramedicine, this typology also offers a framework for examining how other professions are positioned within drug and health policy. Crucially, by refusing flat ontologies and instead seeking the structural mechanisms beneath the text, this approach makes policy silences visible as sites of analytical significance rather than mere gaps. Importantly, it highlights not only what is written but also what is left unsaid, making policy silences visible. Shining a light on these silences is a critical first step in examining how the policy landscape shapes the capacity to act for the profession in practice.

Strengths, limitations, and future research directions

A strength of this review lies in its systematic approach, which applied a consistent typology to classify patterns of paramedic inclusion across a broad set of policy documents. This typology not only provides theoretical insight into the mechanisms through which professions are legitimized or excluded in policy contexts, but also enables the identification of gaps and inconsistencies across multiple levels of government. By comparing federal and provincial policies, the analysis highlights how divergent or overlapping directives can either reinforce the role of paramedics or generate conflicting messages about their place within care pathways. This cross-jurisdictional perspective represents a key contribution of the review, illustrating how policy alignment, or misalignment, shapes opportunities for innovative program design.

Limitations include the exclusion of clinical guidelines, implementation documents, and evaluation reports, which may contain additional perspectives on paramedic roles. Health policy documents that directly pertain to paramedicine, like the BC Health Professions Act (BCHPA) were also excluded, as it governs professional regulation broadly rather than substance-related policy specifically. By contrast, the Emergency Medical Assistants Regulation was retained because it defines how drug policy is enacted within paramedic practice, aligned with the study's focus on governance instruments that shape care for people who use drugs. The analysis was also limited to provincial (BC) and Canadian federal documents, and further research should examine other provinces, in addition to municipal, organizational, or international policy texts for comparison. Future research should build on this typology to test how explicit, indirect, or absent policy references translate into practice, shaping paramedics' ability to innovate and engage in integrated models of care. Moreover, the inquiry into how policies translate into practice must also center the perspectives of people receiving care, ensuring that analysis captures not only how policies influence the delivery of care at the actual level, but also how that care is experienced by people who use drugs.

Conclusion and recommendations

The fragmented inclusion of paramedics in policy highlights the importance of deliberate recognition in strategic frameworks and legislation. Explicit mention of paramedics in policy may legitimize their evolving contributions, support innovation, and expand their scope in areas such as harm reduction, and integrated care. Conversely, indirect or absent references risk limiting opportunities for system transformation.

Policymakers should ensure that the role of paramedics is explicitly articulated within both emergency and preventive health systems, particularly across domains such as substance use, mental health, and community-based care. Clear policy recognition of paramedic contributions supports coherence across service delivery models and enables more integrated, responsive approaches to population health. These findings also offer the profession a concrete evidence base for advocacy, demonstrating how policy-level inclusion directly shapes their ability to deliver upstream and integrated models of care for people who use drugs. For system reformers, the typology makes visible how absences at the policy level constrain innovation and limit the uptake of preventive, integrated models of care, particularly in

drug policy domains where crises have exposed the limits of purely reactive and medicalized responses. Future work in Phase 2 will build on this empirical foundation through full realist synthesis, examining the contexts, mechanisms, and outcomes that shape the conditions for paramedic models of care for people who use drugs.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Author Contribution

JB conceptualized and designed the study, developed the methodology, conducted the investigation, curated and analyzed the data, created all visualizations, wrote the original manuscript draft, and administered the project. AB contributed to study conceptualization and methodology development, supervised the research, and reviewed and edited the manuscript. ED and PFJ contributed to study conceptualization, validated the findings, and reviewed and edited the manuscript. All authors read and approved the final manuscript.

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Data Availability

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Figures

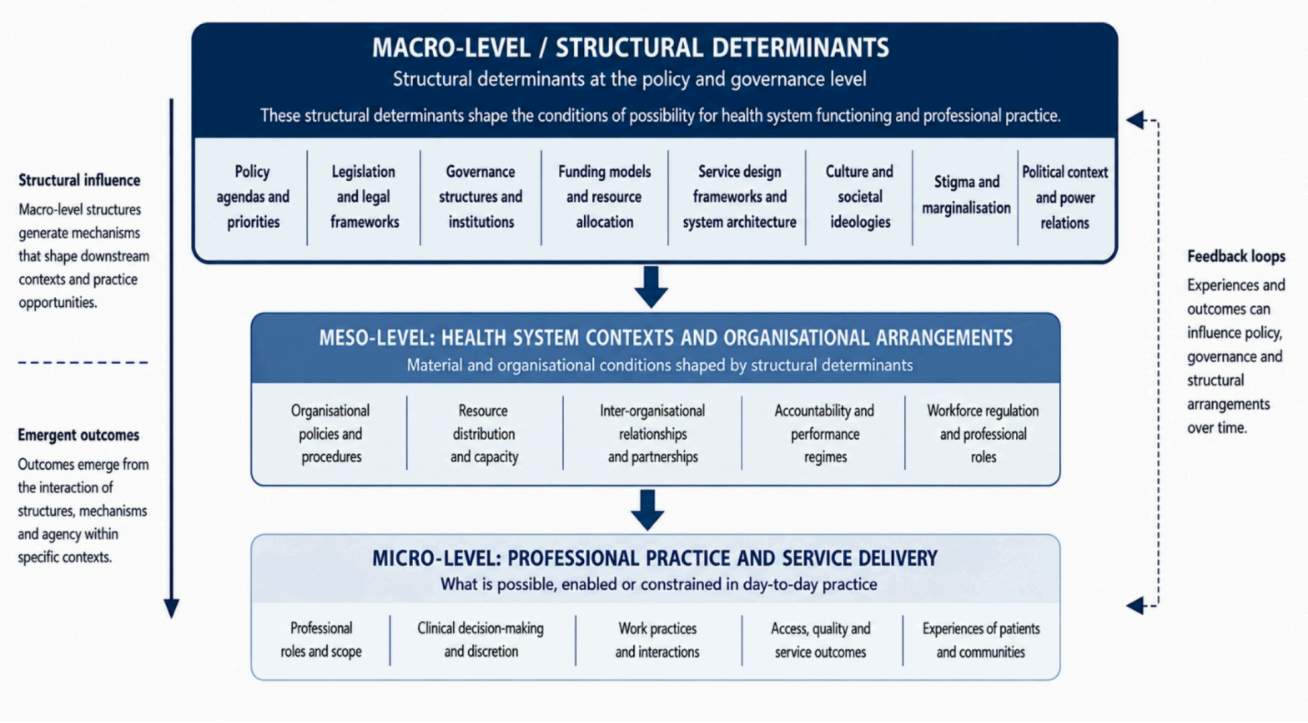


Figure 1

Policy and governance as structural determinants shaping professional practice

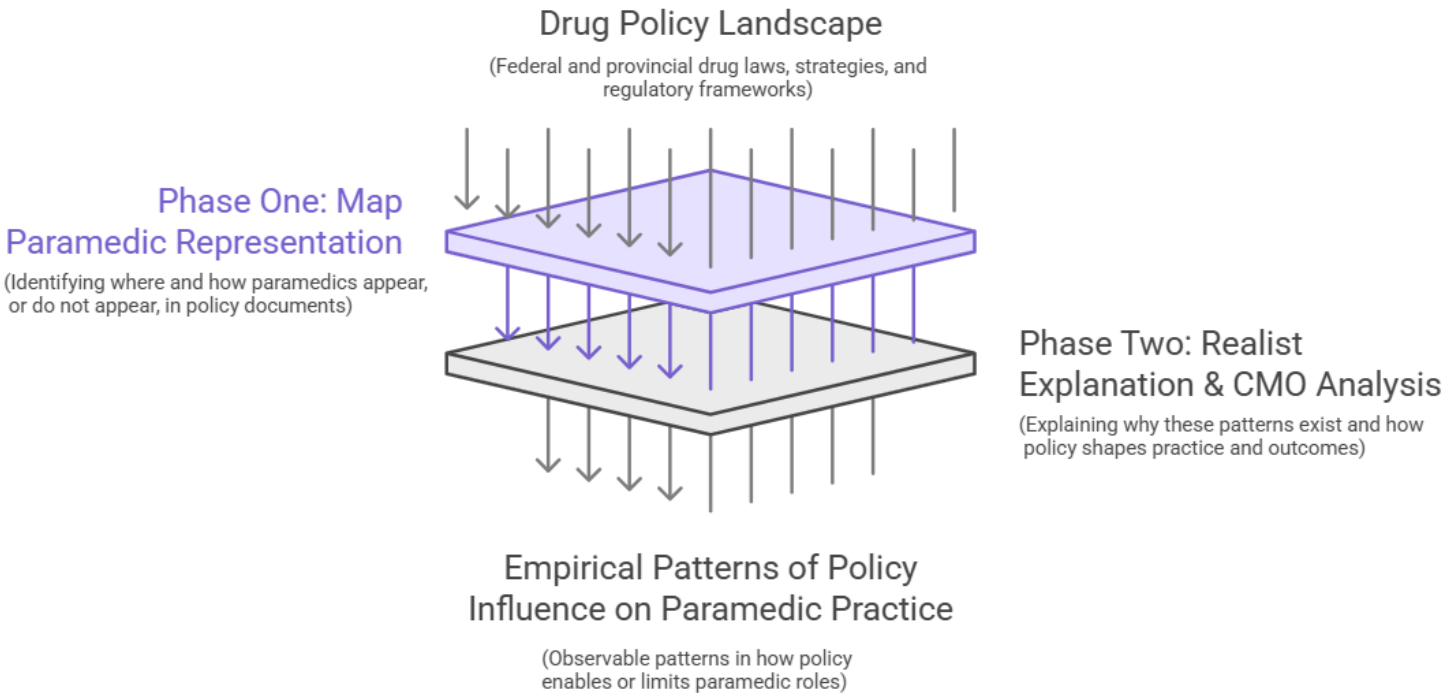


Figure 2

Phased Approach to Realist Informed Policy Analysis

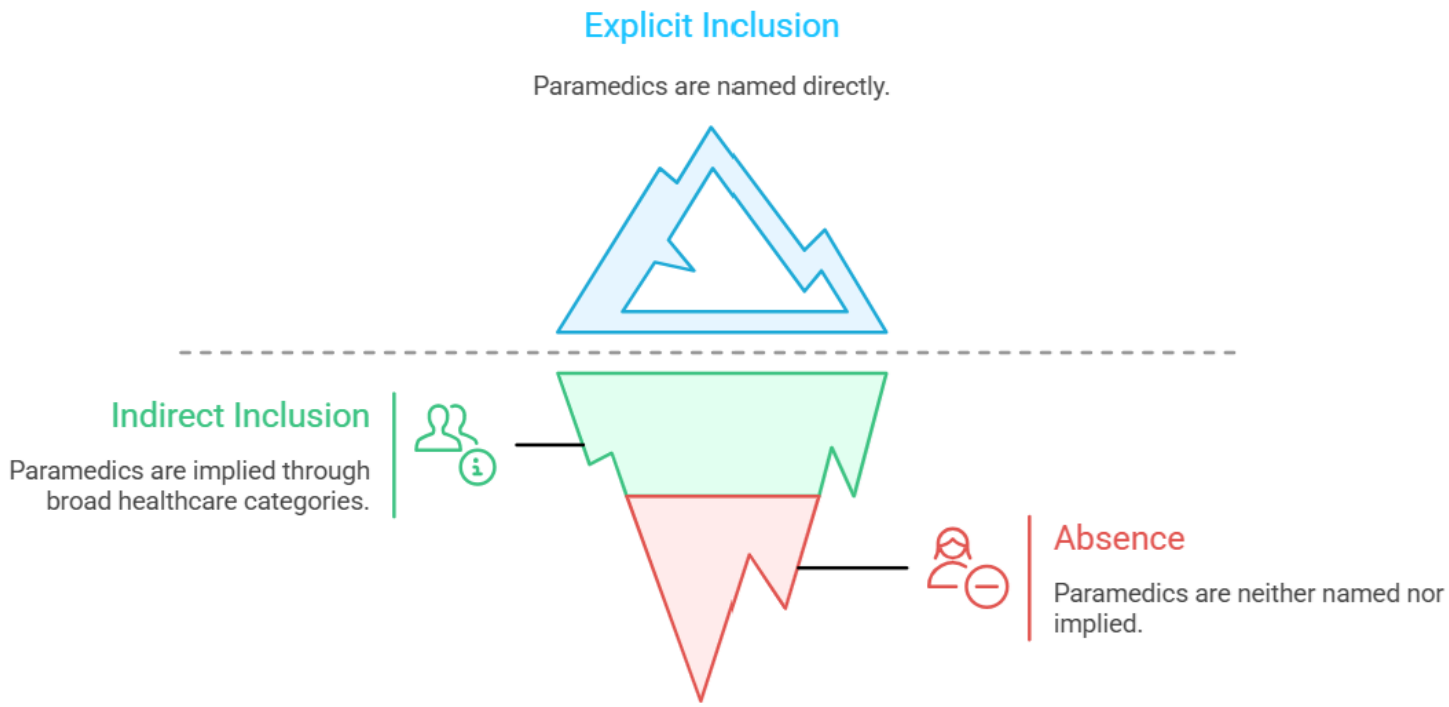


Figure 3

Paramedic Representation Policy Typology

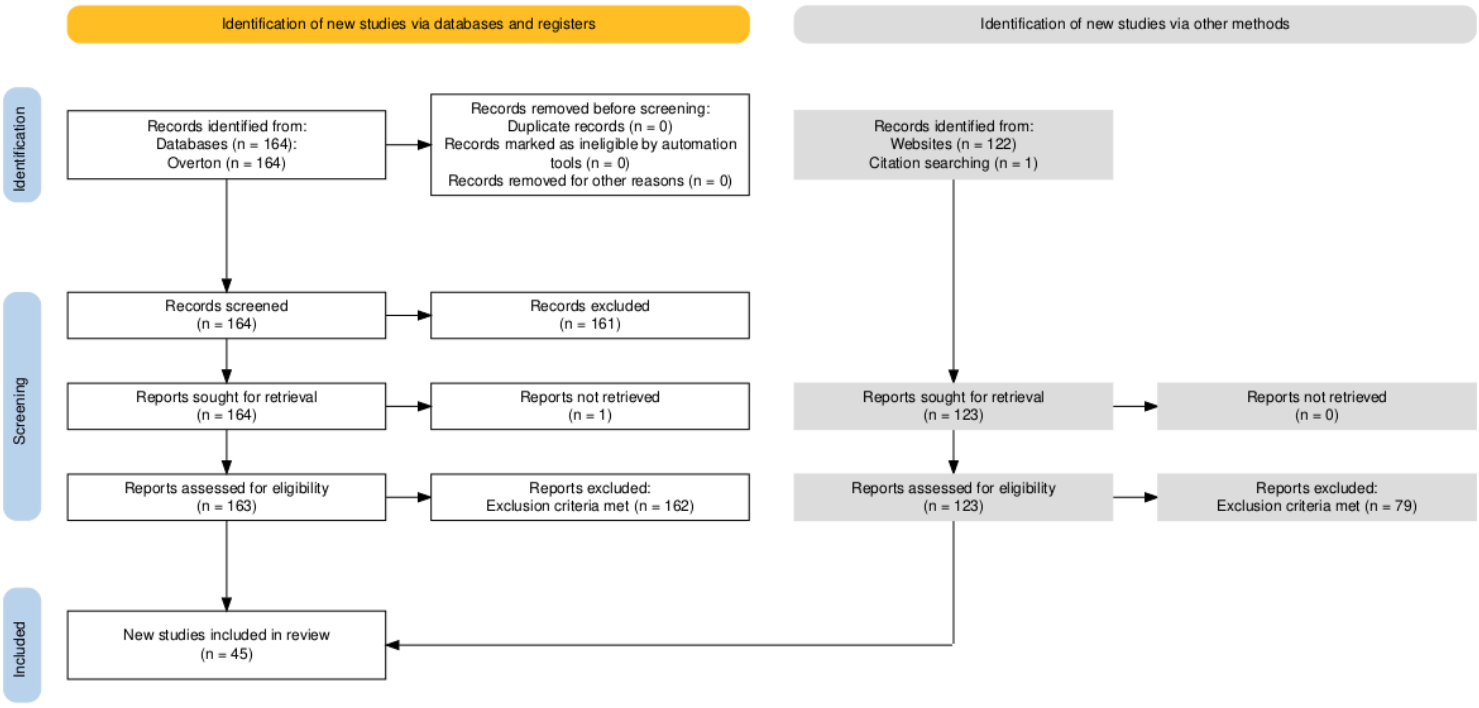


Figure 4

Prisma flow diagram for search