Other / Improvised Less-Lethal Force

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Definition

Other / Improvised Less-Lethal Force is a residual category for non-standard objects or ad-hoc tactics used by police as force even though the object was not designed, issued, or principally intended for that purpose.

The category captures situations in which officers improvise with what is immediately available in an attempt to contain the subject, create distance, interrupt an attack, displace or knock the subject down, strike the subject, obstruct movement, facilitate capture, or avoid or delay resort to lethal force.

Examples in the Lab's codebook include:

- using a flashlight as a hand-held impact weapon;
- using a fire extinguisher as an improvised hand-held chemical weapon;
- using a firehose as an improvised extended-range impact weapon; and
- using a moving police vehicle as an improvised extended-range impact weapon.

These examples are grouped together because of their improvised status, not because they share a common physical mechanism. A flashlight strike, extinguisher discharge, high-pressure water stream, and vehicle impact are fundamentally different interventions, which means that "Other / Improvised" is a coding category, not a coherent weapon class.

Why This Category Exists

Police encounters do not always unfold around the equipment officers planned to use. An officer may confront a rapidly developing threat while separated from standard intervention equipment, already engaged in a physical struggle, unable to safely access a holstered option, responding alongside non-police emergency personnel, using environmental objects for immediate protection, or facing a situation for which the available standard tools are poorly suited. In those circumstances, an ordinary object may become a weapon of opportunity.

This is not purely theoretical. An older U.S. National Institute of Justice study of 1,585 adult custody arrests in Phoenix found that when officers used a weapon, the most frequently reported weapon was a flashlight. The study predates modern widespread CEW deployment, but it confirms that ordinary equipment has historically been repurposed as force during police encounters. The concept also exists explicitly in police reporting systems, where some agencies and jurisdictions distinguish a weapon of opportunity from a standard intervention weapon.

Core Analytical Problem

Standard less-lethal weapons are ordinarily purpose-designed, tested, trained, governed by policy, associated with known deployment methods, subject to maintenance requirements, and accompanied by at least some evidence regarding effectiveness or injury. Improvised force may have none of these safeguards – the object may not have been tested for human impact, chemical exposure, pressure, restraint, collision, repeated application, anatomical risk, or the way an officer actually uses it. The central trade-off is therefore that improvisation may create a non-firearm option where no standard option is immediately workable, but its effectiveness and injury profile are often less predictable than those of purpose-built less-lethal tools.

Improvisation Does Not Automatically Mean "Less Lethal"

The category is defined by the officer's use of an improvised option in a less-lethal role, not by a guarantee that the method cannot kill. This distinction is especially important for vehicles, heavy blunt objects, high-pressure water, chemical extinguishing agents, impacts to vulnerable anatomy, and repeated applications.

A moving vehicle, for example, is capable of causing major blunt trauma, crushing injury, traumatic brain injury, fractures, internal injury, or death. The fact that an officer used it in an effort to avoid firearm discharge does not mechanically transform the vehicle into a low-injury technology. Similarly, a flashlight used as an impact weapon may produce an injury profile that differs substantially from a purpose-designed baton. For the Lab, the coding category describes the intervention's improvised less-lethal role and should not be read as a medical conclusion that the intervention carried low lethality.

Availability of Standard Less-Lethal Force

Improvised force should be interpreted partly in relation to what other options were actually available at the decision point. This is important because the modern literature generally supports the value of giving officers multiple purpose-built less-lethal options.

MacDonald, Kaminski, and Smith (MacDonald et al., 2009) analyzed 24,380 use-of-force incidents across 12 U.S. police departments and found that use of conducted energy devices was associated with lower odds of injury to both officers and civilians after adjustment for incident and policy factors. A systematic review by Sheppard and Welsh (Sheppard & Welsh, 2022) identified 12 evaluation studies examining less-lethal weapons and concluded that such technologies show promise for reducing harm, while emphasizing that the evidence remains incomplete. More recent multi-agency U.S. research by Petersen and colleagues (Petersen et al., 2025) examined 2,348 force incidents from 17 large urban and metropolitan agencies; injury risks varied substantially across conventional less-lethal options, reinforcing that less-lethal tools are not interchangeable.

These studies concern purpose-built force options, not improvised force. Their relevance is indirect but important: if reliable, trained, purpose-built less-lethal options are available, the operational need to improvise may decrease.

Availability Is Not the Same as Suitability

More equipment does not guarantee that one of the available tools will work in the actual situation. A standard less-lethal option may be poorly suited because of distance, barriers, crowding, clothing, flammability, probe trajectory, nearby third parties, confined space, weapon type, subject movement, position of officers, risk of crossfire, or lack of time to deploy it. The better question is therefore not whether the officer had a Taser, spray, baton, or impact launcher, but whether a standard option was realistically accessible and suitable at the moment force was required.

Policy and Administrative Control

Standard weapons

Purpose-built police weapons usually come with approval processes, specifications, training, recertification, reporting rules, inspection, and policy-defined use conditions. Improvised force, by definition, often sits outside that structure. Agencies cannot realistically write a deployment protocol for every object an officer may encounter, but unrestricted improvisation would undermine the purpose of having approved-force standards.

A useful U.S. example: flashlight policy

The Los Angeles Police Department provides a clear example of how an agency can address this tension. LAPD policy identifies illumination as the flashlight's primary purpose and discourages its use as an impact device, but permits impact use under exigent circumstances when a baton is not feasible. The policy also requires reporting, explanation of why the flashlight was used instead of the standard impact weapon, and critical review of the decision. This illustrates a defensible policy principle: improvised force may be permissible under exigent circumstances without being treated as a routine substitute for approved equipment.

Suitability of Ad-Hoc Responses

Potential justification

Improvisation may be most defensible where a serious threat is developing, the officer's standard option cannot be accessed, the available standard tool is unlikely to work, immediate action is necessary, the improvised option plausibly reduces expected harm, and the realistic alternative may be lethal force.

Weak justification

Improvisation is harder to defend where a conventional tool was immediately available and suitable, officers had time to obtain purpose-built equipment, the improvised method creates substantially greater injury risk, the method is punitive, the intervention continues after the threat is controlled, or the object is used primarily because it is expedient rather than necessary.

Improvised Impact Weapons

Flashlights and similar objects

A flashlight can become an improvised impact weapon when used to strike, and historically U.S. force research documented flashlight use as a police weapon. The practical advantage is obvious: it may already be in the officer's hand, it may be accessible when a baton is not, and it can be used during a sudden close-range struggle. The disadvantages are equally important. A flashlight was not necessarily designed with controlled energy transfer, standardized striking surfaces, predictable deformation, or injury minimization as primary design objectives, and its mass, edges, shape, and construction may therefore create a different injury profile from a purpose-built impact weapon. There is little contemporary peer-reviewed evidence quantifying the relative injury risk of flashlight strikes versus baton strikes.

Improvised Chemical or Displacement Tools

Fire extinguisher

A fire extinguisher may be used to obscure vision, create a chemical or particulate deterrent, interrupt forward movement, or create enough disruption for officers to reposition. Extinguishing agents are designed for fire suppression, not human incapacitation, and depending on the extinguisher type, exposure may create eye irritation, respiratory irritation, obscured vision, disorientation, environmental contamination, and potential medical complications. The intervention should therefore not be treated as equivalent to police OC spray merely because both involve an airborne agent.

Firehose

A firehose can potentially create distance, displacement, loss of balance, interruption of movement, or physical separation, but a high-pressure water stream was not designed as a calibrated police impact munition. The result may depend on water pressure, nozzle type, distance, surface conditions, subject balance, anatomy struck, and surrounding hazards. Potential secondary injuries may arise from falls, impact with structures, being driven into hazards, or loss of footing. There is little police-specific empirical literature establishing a safe or effective operating envelope for such use.

Improvised Vehicle Force

The moving police vehicle is the most consequential example in this category.

Why officers may improvise with a vehicle

A vehicle may be the largest immediate barrier available, already positioned between police and the subject, capable of rapidly creating distance, able to interrupt a subject moving toward another person, or the only immediately available means of stopping a potentially lethal attack. An officer may therefore use the vehicle in an attempt to stop a threat without firing a gun.

The risk is intrinsically high

Vehicle impact is fundamentally different from many conventional less-lethal tools. Outcome depends on vehicle mass, speed, angle, surface, subject position, secondary impact, and whether the person is pinned, thrown, or run over – variables that are difficult to control with precision during an emergency. Using a police vehicle against a person may therefore be intended as an alternative to shooting while still carrying a substantial risk of serious injury or death. Vehicle impact is better understood as an improvised use of force that may be selected in an effort to avoid firearm force, but whose actual lethality depends heavily on how the vehicle is used.

Relevance to Edged-Weapon Encounters

Improvised force may be particularly relevant to edged-weapon incidents because these encounters can create a sudden mismatch between a rapidly moving contact threat and whatever intervention equipment happens to be immediately usable.

Potential role

Examples might include striking with a flashlight when the officer cannot access a baton, using a door, chair, equipment case, or other object as a barrier, using an extinguisher to interrupt an advance, using a hose or other environmental system to maintain distance, or using a vehicle to block or interrupt movement. The underlying objective is often to create enough separation or disruption to prevent the edged weapon from reaching a person.

Potential advantage

Improvised force can sometimes exploit the immediate environment faster than officers can retrieve specialist equipment, wait for tactical resources, reposition, or transition to another issued weapon. If the alternative at that moment is firearm discharge, even a crude improvised option may offer substantial potential benefit.

Potential disadvantage

Improvised tools may fail unpredictably, create new hazards, require closer distance, cause severe injury, obscure officers' view, affect bystanders, create slippery or contaminated environments, or leave officers

without a reliable follow-up option. In edged-weapon encounters, failure can have unusually serious consequences because the subject may remain capable of rapidly closing distance.

The correct comparison

An improvised intervention should not be compared with an imaginary perfect option. The relevant comparison is what was realistically available at that moment. If the realistic alternative was immediate firearm discharge, then an unconventional but plausible non-firearm intervention may represent harm reduction even if it is not ideal. If the realistic alternative was continued safe containment, an available shield, a purpose-built less-lethal option, or waiting for additional resources, then improvisation may be harder to justify.

Perception of Unexpected Police Force

Improvised force creates a distinctive legitimacy problem because the public often evaluates police actions not only by outcome but also by whether the intervention looks like recognizable policing. A Taser, baton, OC spray, or shield is readily identifiable as police equipment. Using a car to strike someone, a firehose to knock someone down, a fire extinguisher against a person, or a flashlight as a club may appear more startling, punitive, reckless, or improvised even where the officer's objective was to avoid shooting.

Force modality affects perception

Recent U.S. experimental research indicates that the form force takes affects how it is judged. Eleuterio-da-Rocha and colleagues (Eleuterio-da-Rocha et al., 2026) found that both civilians and police officers evaluated grappling more favorably than striking, even when the broader use-of-force context was held comparatively constant. Gerber and Jackson (Gerber & Jackson, 2017) similarly found in a U.S. sample that legitimacy was associated with support for force when it remained within perceived reasonable bounds, whereas support for excessive force was driven by different attitudes. Goldrosen and Jones (Goldrosen & Jones, 2026) found in a nationally representative U.S. experiment that respondents were strongly sensitive to threat imminence when evaluating deadly force.

Together, this literature suggests that public reaction to improvised force will likely depend on what the threat appeared to be, how immediate it was, whether the intervention seemed proportionate, whether viewers understood why the unusual method was chosen, and whether the action looked like protection or punishment.

Unexpected does not mean illegitimate

The public may initially react negatively to unconventional footage, but that does not establish that the intervention was unlawful, unreasonable, tactically unsound, or more harmful than the alternative. It does create a communication burden: an agency may need to explain what threat officers perceived, why a conventional option was unavailable or unsuitable, what alternative force was being avoided, and why the improvised method was selected.

Public Legitimacy and Trust

Kyprianides and colleagues [(Kyprianides et al., 2021)] found that public judgments about police force depend heavily on prior trust and legitimacy. Their experiments also found that weapon-based resolutions were generally viewed less favorably than talking or handcuffing, although participants did not distinguish sharply among several conventional weapons. Improvised force may pose an even more complicated legitimacy problem because the public has no familiar policy category into which to place it.

This is particularly salient in video-recorded incidents. A brief clip showing an officer driving into a person, spraying them with an extinguisher, or striking them with an ordinary object may look shocking before the viewer understands the threat or the alternative the officer was attempting to avoid. The research does not directly establish how the public evaluates these specific improvised tactics, which is an important evidence gap.

Evidence of Effectiveness

Overall assessment

The evidence is low in strength for improvised force itself and moderate-to-strong for the broader proposition that availability of purpose-built less-lethal options can reduce injury and provide alternatives to more severe force. The strongest research does not evaluate improvised tactics directly but instead suggests that conventional less-lethal options can alter injury risk [(MacDonald et al., 2009; Petersen et al., 2025)], that less-lethal weapons can provide alternatives to physical or firearm force [(Sheppard & Welsh, 2022)], that policy affects how officers understand and use less-lethal options [(Terrill & Paoline, 2013)], and that public acceptance of force depends on legitimacy, context, proportionality, and force modality [(Gerber & Jackson, 2017; Kyprianides et al., 2021; Goldrosen & Jones, 2026)]. Direct empirical research on improvised police force remains extremely sparse.

What we do not know

There is no robust evidence establishing how often U.S. officers use improvised less-lethal force, which objects are most commonly used, success rates, injury rates, firearm-substitution rates, failure rates, or whether agencies with broader less-lethal inventories improvise less often. Those are substantial gaps.

Policy and Permissibility

Force law generally evaluates the action, not the manufacturer's intended purpose

Under U.S. Fourth Amendment doctrine, the central constitutional question is generally whether the officer's force was objectively reasonable under the totality of the circumstances. An object does not become constitutionally permissible merely because it is normally harmless, nor does it automatically become impermissible because it was not designed as a police weapon. Relevant factors include the severity and

immediacy of the threat, risk to officers or others, resistance, attempted escape, manner in which the object was used, foreseeable injury, and the circumstances confronting the officer.

Improvised use may change the level of force

The same object can represent very different levels of force depending on use. Positioning a vehicle as a barrier, nudging a person at very low speed, striking a person with a moving vehicle, and deliberately running a person over should not be treated as equivalent simply because each involves a police vehicle. Likewise, using a flashlight defensively to block an attack differs from repeatedly striking the head with it.

Vehicle cases

U.S. Supreme Court cases involving vehicle pursuits – such as *Scott v. Harris*, *Plumhoff v. Rickard*, and *Mullenix v. Luna* – demonstrate that vehicle-related police force is assessed in relation to the threat and manner of intervention. Those cases do not establish a general rule for using a police vehicle against a person on foot, but they reinforce the broader principle that the actual method and foreseeable danger matter more than the ordinary purpose of the equipment.

Ethical and Moral Considerations

Harm reduction under exigency

The strongest ethical argument for improvisation is that a non-standard intervention may prevent a more injurious or lethal one. An officer who uses an available object to interrupt an edged-weapon attack rather than immediately firing may be attempting to reduce total harm.

Lack of testing and predictability

The ethical counterweight is that improvised methods may expose the subject to poorly characterized risk. Purpose-built weapons at least provide some degree of testing, training, known limitations, medical literature, and policy oversight. Improvised tools typically do not.

Necessity matters

The ethical legitimacy of improvisation therefore depends heavily on necessity. The more the intervention departs from ordinary police equipment and the more injury it can foreseeably cause, the stronger the justification should be that immediate action was necessary, a safer standard option was not realistically available, and the intervention was directed at stopping the threat rather than punishing the person.

Optics are ethically relevant but not dispositive

An intervention that looks alarming can damage community trust even if it prevents a shooting. Police therefore face two responsibilities: choosing the least harmful workable intervention under the circumstances, and explaining unusual force transparently afterward.

Evidence Limitations

- "Other / Improvised" is not one intervention and should not be assigned a single technical effectiveness rate.
- There is very little peer-reviewed research directly examining improvised police force.
- The injury mechanisms of a flashlight, extinguisher, hose, vehicle, chair, door, or other object are fundamentally different.
- Police reporting systems may place improvised force into broad "other" categories that conceal what actually occurred.
- The officer's intent to avoid lethal force does not establish that the improvised method was medically less lethal.
- Purpose-built less-lethal research is only indirect evidence for improvised-force decision-making.
- Standard option availability does not establish standard option suitability at the critical moment.
- Improvisation is likely strongly selected into unusual, rapidly evolving, or already dangerous incidents.
- Public-perception research rarely tests the unconventional interventions represented by this category.
- Vehicle force may range from barrier use to potentially lethal impact and should be interpreted according to manner of use.
- There is little evidence on whether broader less-lethal inventories reduce officers' need to improvise.
- Edged-weapon-specific data on improvised force are essentially absent.

Bottom Line

Category coherence

This is a residual coding category linking interventions by their improvised status rather than by mechanism, and its coherence is therefore low by design.

Operational rationale

The rationale is strong under some exigencies. Officers may improvise because no standard option is accessible or suitable and immediate action is needed.

Effectiveness

Each improvised intervention must be evaluated according to its actual mechanism and circumstances; no class-level effectiveness estimate is possible.

Injury predictability

Improvised tools are usually not designed or tested for controlled application to people, and injury predictability is generally lower than for purpose-built force options.

Availability of standard less-lethal options

U.S. evidence supports the broader value of purpose-built less-lethal alternatives, but equipment availability alone does not prove that an option was usable in the specific encounter.

Edged-weapon relevance

Rapid contact threats can create circumstances in which environmental objects provide the only immediately workable alternative to lethal force, making this category potentially important in edged-weapon incidents.

Vehicle use

A police vehicle may be used in an attempt to prevent a shooting while still creating substantial risk of serious injury or death, and requires special caution.

Public perception

Unexpected interventions may appear more alarming or punitive because they fall outside familiar police force categories. Research supports the importance of context, legitimacy, proportionality, and force modality, but direct studies of improvised police force are lacking.

Policy

Agencies are best served by treating improvised force as exceptional rather than routine, permitting reasonable improvisation under exigent circumstances while requiring clear reporting, supervisory review, and explanation of why approved equipment was unavailable or unsuitable.

Overall confidence is low for the residual category itself and moderate for the broader less-lethal availability and public-perception principles used to interpret it.

Core Peer-Reviewed Evidence

1. MacDonald, J. M., Kaminski, R. J., & Smith, M. R. (2009)
The Effect of Less-Lethal Weapons on Injuries in Police Use-of-Force Events.
American Journal of Public Health, 99(12), 2268–2274.
DOI: 10.2105/AJPH.2009.159616

Citation key: `<span class="cite">(MacDonald et al., 2009)</span>`

Priority: Essential U.S. less-lethal availability/outcome evidence.

Contribution: Analysis of 24,380 use-of-force incidents across 12 U.S. police departments.

Key finding: Conducted energy device use was associated with significantly lower odds of injury to civilians and officers after adjustment for incident and policy factors.

Relevance: Supports the value of having purpose-built alternatives to more injurious force.

Limitation: Does not evaluate improvised force.

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2. Sheppard, K. G., & Welsh, B. C. (2022)

Can police use of less-than-lethal weapons reduce harm during violent police-citizen encounters? A systematic review and directions for future research.

Aggression and Violent Behavior, 64, 101748.

DOI: 10.1016/j.avb.2022.101748

Citation key: `<span class="cite">(Sheppard & Welsh, 2022)</span>`

Priority: Essential synthesis.

Contribution: Systematic review of 12 evaluation studies on less-lethal weapons and harm.

Key value: Supports the broader harm-reduction rationale for providing officers with non-firearm intervention options.

Limitation: Purpose-built weapons only; indirect to improvisation.

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3. Petersen, K., Koper, C. S., Taylor, B. G., Liu, W., & Sheridan-Johnson, J. (2025)

Less-Lethal Weapons and Civilian Injury in Police Use of Force Encounters: A Multi-agency Analysis.

Journal of Urban Health, 102(2), 389–399.

DOI: 10.1007/s11524-024-00940-1

Citation key: `<span class="cite">(Petersen et al., 2025)</span>`

Priority: High contemporary U.S. less-lethal evidence.

Contribution: Analysis of 2,348 force incidents from 17 large urban and metropolitan U.S. agencies.

Key finding: Injury risk varied substantially by weapon type; chemical agents had lower predicted hospitalization/death risk than CEWs, impact weapons, and police canines in the adjusted models.

Relevance: Demonstrates that even purpose-built “less-lethal” options have materially different risk profiles.

Limitation: Does not evaluate improvised methods.

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4. Terrill, W., & Paoline, E. A., III (2013)

Less Lethal Force Policy and Police Officer Perceptions: A Multisite Examination.

Criminal Justice and Behavior, 40(10).

DOI: 10.1177/0093854813485074

Citation key: `<span class="cite">(Terrill & Paoline, 2013)</span>`

Priority: Important U.S. policy evidence.

Contribution: Survey of 990 patrol officers across three agencies with differing less-lethal force policies.

Key value: Demonstrates that organizational policy and perceived restrictiveness are important components of how officers understand force options.

Relevance: Improvised force exists partly outside the standardized policy structures applied to approved equipment.

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5. Gerber, M. M., & Jackson, J. (2017)

Justifying violence: legitimacy, ideology and public support for police use of force.

Psychology, Crime & Law, 23(1), 79–95.

DOI: 10.1080/1068316X.2016.1220556

Citation key: `<span class="cite">(Gerber & Jackson, 2017)</span>`

Priority: Important U.S. legitimacy evidence.

Contribution: U.S. survey examining police legitimacy, ideology, and support for reasonable versus excessive police force.

Key finding: Legitimacy predicted support for force within perceived reasonable bounds but not excessive force.

Relevance: Helps explain why unusual police force is likely to be judged in relation to proportionality and perceived necessity rather than simply legality.

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6. Kyprianides, A., Yesberg, J., Milani, J., Bradford, B., Quinton, P., & Clark-Darby, O. (2021)

Perceptions of police use of force: the importance of trust.

Policing: An International Journal, 44(1), 175–190.

DOI: 10.1108/PIJPSM-07-2020-0111

Citation key: `<span class="cite">(Kyprianides et al., 2021)</span>`

Priority: Supporting force-perception evidence.

Contribution: Two experiments examining how force modality and prior trust shape judgments of police force.

Key finding: Weapon-based resolutions were judged less acceptable than talking or handcuffing; prior trust strongly predicted acceptability.

Limitation: UK sample and conventional force options rather than improvised tactics.

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7. Goldrosen, N., & Jones, B. (2026)
The imminence divide: public judgments of deadly force by police and civilians.
Journal of Experimental Criminology.
DOI: 10.1007/s11292-026-09759-z

Citation key: `<span class="cite">(Goldrosen & Jones, 2026)</span>`

Priority: High contemporary U.S. perception evidence.

Contribution: Nationally representative U.S. survey experiment involving 1,183 respondents.

Key finding: Threat imminence strongly affected support for deadly force, with respondents generally opposing shooting where the threat was not imminent.

Relevance: Supports the proposition that public reaction to extraordinary or improvised force will depend heavily on perceived immediacy of the threat.

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8. Eleuterio-da-Rocha, J., Tanksley, P. T., Martaindale, M. H., Johncox, J., & Blair, J. P. (2026)
Striking or grappling? Comparing public and officers' perceptions of police use of force.
Journal of Criminal Justice, 103, 102601.
DOI: 10.1016/j.jcrimjus.2026.102601

Citation key: `<span class="cite">(Eleuterio-da-Rocha et al., 2026)</span>`

Priority: High contemporary force-modality evidence.

Contribution: U.S. experimental study comparing civilian and police perceptions of striking versus grappling.

Key finding: Both groups evaluated grappling more favorably than striking.

Relevance: Demonstrates that the visible form of force affects judgments even when force remains within the same broad encounter.

Limitation: Does not test improvised force.

Evidence Rating

Purpose-built less-lethal harm-reduction evidence: ★★★★☆
Substantial U.S. evidence supports the broader value of conventional less-lethal options.

Improvised-force frequency evidence: ★★☆☆☆
Historical and administrative evidence confirms weapons of opportunity occur, but modern U.S. denominator data are sparse.

Improvised-force effectiveness: ★☆☆☆☆
No coherent evidence base because the category contains fundamentally different mechanisms.

Improvised-force injury evidence: ★☆☆☆☆ to ★★☆☆☆
Highly intervention-specific and poorly quantified.

Policy / administrative evidence: ★★★☆☆
Clear rationale exists for treating improvisation as exceptional and reviewable rather than routine.

Public-perception evidence: ★★★★☆ for general force perception; ★☆☆☆☆ for improvised force specifically.

Edged-weapon-specific evidence: ★☆☆☆☆
Strong situational rationale but little direct empirical research.

Overall confidence: Low for the intervention category itself; moderate for the broader principles used to interpret it.

What it is

A residual coding category for non-standard or improvised objects and tactics used as less-lethal force. It captures situations where officers improvise with what is immediately available – a flashlight, fire extinguisher, firehose, or vehicle – when conventional equipment is unavailable, inaccessible, or judged insufficient. The category is defined by the object's improvised status, not by a shared physical mechanism.

How the Lab records it

Codebook variable: `I_Other`. Coded 1 when the narrative describes a non-standard or improvised object or tactic used as force against the subject; coded 0 otherwise.

This variable rolls up into I_LessLethal (/methods/I_LessLethal).

Research-library conclusion

Other / Improvised Less-Lethal Force should be understood as a residual category of exigent problem-solving rather than a distinct weapon technology. The defining feature is that police repurpose an object or tactic that was not designed as a standard intervention option – such as a flashlight, fire extinguisher, firehose, or moving police vehicle – in an attempt to contain, interrupt, strike, displace, or stop a subject without immediately resorting to firearm force. This can represent genuine harm reduction when the realistic alternative is lethal force and no purpose-built option is accessible or suitable. It can also introduce unusually unpredictable injury because the improvised object has not been designed, tested, or trained for controlled application to people. In edged-weapon encounters, the category is particularly relevant because rapidly developing contact threats may require officers to exploit whatever barrier, impact source, or environmental tool is immediately available. The correct analysis therefore depends heavily on the realistic alternative at the actual decision point. A vehicle used to interrupt an imminent knife attack may have been chosen to prevent a shooting, but it can still cause fatal trauma and should not be assumed medically "less lethal." Public perception adds another complication: unconventional interventions can look punitive, reckless, or shocking because they do not resemble familiar police force options. Research suggests that legitimacy judgments depend strongly on threat imminence, proportionality, trust, and the visible form of force, but direct research on improvised police tactics is extremely limited. The most defensible policy approach is to preserve reasonable officer improvisation under genuine exigency while treating it as exceptional, requiring clear reporting and supervisory review, and asking why an approved, purpose-built option was unavailable or unsuitable.

References

Eleuterio-da-Rocha, J., Tanksley, P. T., Martaindale, M. H., Johncox, J., & Blair, J. P. (2026). Striking or grappling? Comparing public and officers' perceptions of police use of force. *Journal of Criminal Justice*, *103*, 102601. https://doi.org/10.1016/j.jcrimjus.2026.102601

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