Background
Juvenile detention facilities in the United States have largely eliminated the use of chemical agents as a measure of controlling behavior. Doing so has maintained the safety of the youth detained as well as staff and administrators. However, some secure facilities still allow staff to carry chemical agents such as pepper spray on their person to respond to youth behavior or conflicts they feel have escalated to the point where additional tools are needed. The removal of chemicals from more facilities has been encouraged by lawmakers and advocacy groups, and it is important to understand current chemical agent utilization and its impacts.

Chemical agents and their effect
Chemical agents are compounds used for incapacitation in a number of settings. They are used to separate individuals and interrupt riots in secure facilities as well as on the street during protests. For this reason, chemical agents are also known as “riot control agents” in some literature.

They accomplish this by irritating the membranes and tissues of the eyes, nose, and mouth, as well as the lungs. The irritation causes an array of side effects including a burning sensation, difficulty breathing, uncontrollable muscle spasms, and even short-term blindness. Each chemical agent has slightly different effects, but all of them are used with the intention of controlling behavior through incapacitation.

Some chemical agents are more commonly found than others in juvenile facilities. Three of the more common substances include Oleoresin Capsicum, Chlorobenzalmalonitrile gas, and Phenacyl Chloride.

Oleoresin Capsicum: An agent derived from the Capsicum genus, most commonly chili peppers. It is often known as “pepper spray,” and occasionally referred to as “OC,” or simply “capsicum.” It is usually found in liquid spray form but can also be used as a powder, gas, or foam.

2-Chlorobenzalmalonitrile Gas: More commonly known as “tear gas,” or “CS gas,” this agent is produced in a lab setting and is often disseminated in a smoke or gas form by mixing it with other solvents.

Phenacyl Chloride: While CS gas has mostly replaced the use of Phenacyl Chloride, this substance is an earlier developed and more toxic variety of synthesized agent often known as its trade name “Mace,” as well as by “CN gas,” or “phenylchloro-methylketone”. CN gas is naturally a crystalline solid that can be released as a smoke, powder, or liquid.

Mace was first introduced as a non-lethal personal weapon against attacks by Alan Litman in the 1960s. Through the 1960s
and 70s, pepper spray was used by law enforcement for protesters and rioters without regulation. This changed with Tennessee vs Garner in 1985 which established deadly force and non-lethal force burdens for police officers. The Fleeing Felon Rule originated with this case, limiting the use of deadly force by law enforcement only to suspects that pose a substantial risk of serious physical harm and limiting the use of force for fleeing suspected felons under the Fourth Amendment.

Juvenile detention facilities began introducing chemical agents as a control method as “Tough on Crime” policies became more established for youth. These policies were implemented and put in place through the 1980s into the early 1990s, with more people serving longer prison sentences than ever before. While most centers in the United States no longer permit agent use, some have maintained previous practices and have adopted a more punitive approach to juvenile treatment that resembles adult prisons.

Health of youth

As reported by the National Institute of Correction’s Desktop Guide to Working with Youth in Confinement, “Use of pepper spray puts the health of youth at risk: chemical agents generate adverse physical reactions that can be exacerbated in secure settings with poor ventilation, causing potential harm to youth and staff, even if they are not direct targets of its use. Children with asthma and other health problems are at particular risk, as are those who are taking psychotropic medications. Studies conducted on the adult population further indicate that the use of pepper spray on those with mental illness may lead to an increase in violent behavior and a worsening of the mental health condition. Moreover, the use of chemical restraints, like mechanical restraints, can traumatize youth and undermine their rehabilitative efforts.”

There are several factors that may contribute to children and adolescents being more vulnerable to chemical agents and their effects on the body. The American Academy of Pediatrics pointed out in 2018 that children can have stronger reactions because they are smaller in size, breathe more rapidly than adults, and their cardiovascular stress response is less developed than adults. All these factors compound the effects of chemical exposure in the bodies of children, creating more health and safety risks for the youth being subjected to sprays, powders, and liquids.

Dr. Irwin Redlener, a professor of public health at Columbia University, reported that children “are uniquely susceptible to deployment of and exposure to riot-control agents such as tear gas and pepper spray,” due to the same factors reported by the American Academy of Pediatrics. The use of such agents can not only present unknown dangers based on the individual’s physical health, but it can also undermine efforts being made towards rehabilitation and behavior improvement without chemical use.

Improper administration

There are physical features of juvenile facilities that can contribute to more intense effects from chemical agent use within the walls. Small, confined spaces with low air flow and limited ventilation can intensify the exposure to the chemicals, especially those in gas/liquid forms that can remain airborne. The added challenge of fully and safely cleaning the space after an agent has been released could contribute to longer term exposures with largely unstudied outcomes.

When juveniles are entering a facility, they often undergo intake screening for certain health conditions and are asked to self-report for their medical records. These records may not be kept up to date and made available to all staff, including those who could choose to administer chemical agents to control behavior. A child could be at a much higher risk for complications when exposed to these compounds and face severe side effects in addition to the expected impacts of tissue inflammation.

If a young person being admitted has certain stimulants in their system upon admission such as cocaine or amphetamines, they can become lethal and much more likely to cause harm when acted upon by the chemicals meant to incapacitate.

In addition, adult staff exposed to and/or utilizing chemical agents, can experience skin being blistered, and swollen. One can experience trouble breathing and begin to wheeze, especially when combined with preexisting respiratory conditions or other breathing restraints such as a covered mouth/nose. Respiratory failure can lead to death, as can chemical burns to the throat or tissue of the lungs. There can be permanent damage to the eye or corneas causing blindness and glaucoma. The high
stress and temporary hypertension make an individual more likely to experience a heart attack or stroke, both of which can be fatal incidents.

**Inappropriate use**

Many facilities that still utilize chemical agents train their staff to reach for them only as a last resort when attempting to manage behavior. However, misuse is very common and chemical agents are utilized even in non-threatening situations. The U.S. Department of Justice’s Civil Rights Division found that chemical agents are used excessively on youth who demonstrated suicidal behaviors, developmental delays, pregnancy, as well as other behavioral and physical challenges.

The use of pepper spray as well as other agents can lead to disproportionate harm for youth with mental illnesses as well as delays in development and intellect. Chemical agents can be seen as a simple alternative for staff when facing a young person demonstrating symptoms of mental illness, and an easy way to control behavior without trying to calm the individual or talk through the incident. This tendency to utilize chemical agents very early in the conflict resolution process can be especially problematic in juvenile facilities, where rates of mental illnesses and disorders are higher than average, even when excluding conduct disorders.

Juvenile facilities can also include individuals displaying behaviors that are a result of past traumas and impactful experiences, unbeknownst to staff and administrators. Without a comprehensive history of the children and the sources of their behaviors, punitive approaches to behavior management such as pepper spray use could cause significantly more harm to youth and future behavior issues than a restorative approach would. By replacing agent use with rehabilitative practices, youth can not only learn from the incident that has occurred, but take steps to avoid future conflict and violence.

In 2014, The Civil Rights of Institutionalized Persons Act Investigation of the New York City Department of Correction Jails on Rikers Island found a pattern of conduct that is in violation of the adolescent inmates’ constitutional rights. They found the youth were regularly facing excessive force from DOC staff as an accepted way to control behavior. Additionally, the pervasive culture of violence involved the use of chemical agents and a lack of de-escalation steps before resorting to OC spray or physical force.

In addition to finding the use of pepper spray highly problematic and “counterproductive,” a federal court in Alexander v. Boyd (876 F. Supp. 133, 1995) found that its “indiscriminate use” violated the constitutional rights of juvenile detainees under the Due Process clause while “teaching the victims to inflict pain as a method of controlling others and makes the juveniles more volatile, more aggressive, and less likely to respond properly to authority figures.”

A 2014 Youth Law Center complaint to the U.S. Department of Justice noted, “Not only does the use of OC spray frequently fail to end fights between detainees, it also does not replace other physical intervention by staff, as staff often go ‘hands-on’ even after deploying OC spray.” This statement undermines the common justification for chemical agents in juvenile detention centers. Their use does not deescalate tense situations; rather, chemical presence can make a conflict more volatile and dangerous than it was to start.

More recently, a 2018 Wisconsin settlement was resolved with an agreement by the state to prohibit the use of pepper spray and other agents in state-run juvenile facilities. The lawsuit involved claims that at one such facility, youth were being repeatedly targeted with the spray and suffered burning and difficulty breathing. These symptoms were not reserved for the youth being targeted, however, and those who were in the vicinities of the incidents when they occurred suffered as well.

**De-escalation techniques**

The Council of Juvenile Correctional Administrators released an issue brief in 2011 reporting that of the 15 states that permit the use of chemical agents, only 5 allow staff to carry pepper spray. The use of pepper spray and other agents is not a widely accepted practice and is associated with worse behavioral outcomes in the facilities that still permit their use. The use of alternative treatments and de-escalation techniques has already become the accepted practice in most facilities and can be further explored.

Facilities can employ several strategies to respond to youth behavior in a non-violent manner and to prevent the occurrence of incidents in the first place. Staff can undergo regular training on updated best practices for conflict management and crisis intervention, and they can receive comprehensive education on the presentation of mental health in youth as well as adolescent development progression. Other methods can include scheduling full days for the youth to prevent excessive downtime and boredom that may lead to conflicts, and ensuring those days include interaction with one another in the eyes of the staff to prevent unseen conflicts from approaching the level of physical violence.
For the facilities that currently use chemical agents, the process of reducing their use can include physically moving the chemicals to a separate office, or requiring authorization for every single use. Staff can join one another for group discussions on guidelines for chemical agent use and steps in the de-escalation process. Introducing a de-brief element after incidents where chemical agents are used allows for staff reflection and can reduce the need for agent use in the future.

A technique being employed in Connecticut is Positive Behavior Intervention and Support (PBIS). The Judicial Branch Court Support Services Division has begun implementing PBIS in the Juvenile Detention Centers as an alternative strategy for behavior management. PBIS refers to a multi-tiered behavioral framework utilized to enhance behavioral practices that reinforces a pro-social environment. It needs thoughtful structuring of situations in a manner that helps facilitate success and avoids premature placement in circumstances that are prone to precipitate recurrent failure. A strength-based approach is a more effective way to view and work with youth and their families that acknowledges that youth have internal and external strengths that should be recognized and supported. It encourages professionals to seek out clients’ abilities, resources, and gifts and apply them to current life challenges. Done correctly, PBIS can promote a positive learning environment that emphasizes pro-social core values and behaviors and teaches youth how to reduce certain behaviors and see the benefits of positive behaviors.

**Current Usage**

**Nationally**

Most states currently prohibit chemical agent use in juvenile facilities. The wide-spread ban is also attributed to the Department of Justice’s acknowledgement of the constitutional limits to its use, especially regarding the 8th amendment. As of 2019, 35 states and 7 counties in California have banned the use of OC spray in juvenile settings. The Council of Juvenile Correction Administrators has found that almost 90 percent of secure juvenile correctional facilities do not authorize chemical agent sprays to be carried on hand by staff. Areas that have more recently passed statutes and voted against chemical agent use include Oklahoma, Mississippi, and Los Angeles, California. States that have barred all chemical agent use or “the intentional release of unpleasant substances” for the purpose of controlling behavior include Louisiana, New Hampshire, New Jersey, and Kansas. While the language differs by state, many in the United States have fully banned chemical agent and spray use or set extremely strict standards for their inclusion in a variety of juvenile settings including detention facilities, schools, group homes, and shelters.

**Connecticut**

In 2019, PA 19-187 Sec. 4 required (effective July 1, 2020) that no later than August 1, 2020, and monthly thereafter, the Commissioner of Correction and the Executive Director of the Court Support Services Division of the Judicial Department to report to the Juvenile Justice Policy and Oversight Committee each instance, if any, of use of chemical agents or prone restraints on any person ages seventeen years of age or younger detained in any facility operated or overseen by commissioner or executive director.

At the November JJPOC meeting, the Department of Correction presented their current statistics on chemical agent use at the Manson Youth Institute. Between Jan 1, 2018 – Sept 30, 2022, the incidents of chemical usage went down from 11 to 9. In all incidents during 2022, where multiple juveniles were involved in physical altercations, staff members used loud verbal directions for individuals to stop fighting and advise them that chemical agent may be utilized if they do not cease their actions. Once it is determined that verbal intervention is not successful, in order to gain compliance and prevent injuries, chemical agent is authorized. In most cases, the incident is resolved by verbal intervention.

The Department of Correction has taken the following steps to educate staff on reduction of chemical agent usage:

- Correctional Academy revamped the mandatory use of force de-escalation program, which includes various use of force scenarios. The program focuses on the skills necessary to accurately assess potentially violent confrontations and defuse them in an effort to avoid using physical force or chemical agent.
• Facility increased the frequency of simulations on incident response. During the “hands-on” simulations, de-escalation techniques, to include verbal intervention, are practiced as means to resolve violent incidents.

• When force is utilized, all materials related to the incident, including videos and paperwork, are reviewed by the facility. Use of force for all chemical agent incidents is always reviewed at a district level. Steps are taken to ensure that chemical agent was necessary and justified.

• Incident is reviewed with the staff member who administered the chemical agent to ensure that the staff member exhausted all alternatives before administering chemical agent. Alternative measures are discussed with the staff member if applicable.

• Mediating sessions with the juveniles involved in the incident may be conducted so that they better understand the department’s response to violent incidents.

Conclusion

The Incarceration Workgroup of the JJPOC is preparing recommendations for 2023 that will include implementation of a PBIS model similar to the one CSSD is utilizing at the Detention Centers. The recommendation includes submitting a commissary implementation plan based on PBIS no later than July 1, 2023 and that effective Oct 1st, 2023, correctional facilities, where children 17 and under are housed, shall include a Positive Behavioral Motivational framework which is a comprehensive universal facility approach to promote a positive environment and by July 1st, 2024, the Positive Behavioral Motivational framework shall be implemented within correctional facilities, where individuals 18-year-old to 25 years-old are housed.

The United Nations standards state that, “the carrying and use of weapons by personnel should be prohibited in any facility where juveniles are detained.” If Connecticut and the United States are to follow this standard, chemical agents will be removed from juvenile facilities when appropriate in favor of de-escalation practices and humane methods of influencing juvenile behavior. This action would comply with internationally established standards of the United Nations as well as state-level recommendations from the JJPOC.

Sources


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This Issue Brief was authored by Faythe Bomba, Psychology BS, Forensic Concentration, Minor in Spanish, May 2025.

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The Tow Youth Justice Institute is a university, state and private partnership established to lead the way in juvenile justice reform through collaborative planning, training, research and advocacy.

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