



National Institute of Justice

Community Acceptance Panel – Riot Control Agents

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Community Acceptance Panel - Riot Control Agents

April 30, 2007
Washington, D.C.

In attendance: Kevin D. Beck, Frederick R. Bieber, David Benjamin, Larry Bickford, Yale Caplan, Joe Cecconi, Brett Chapman, Marian Daggett, Joshua Ederheimer, Samuel Golway, John C. "Jack" Grant, David Hagy, Dalia Hashad, Sid Heal, Carol Henderson, Bruce Hyma, Col. Kirk Hymes, John M. Kenny, John Morgan, Jonathan D. Moreno, Susan Narveson, John Reinstein, Fred D. Taylor, Danielle Weiss

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The National Institute of Justice (NIJ) convenes community acceptance panels before embarking on new research and development initiatives to gather input from relevant communities. NIJ sought input on a proposed initiative to develop safer, more effective use-of-force options for law enforcement officers. Panel participants discussed chemical options, the risk factors associated with their use, potential delivery mechanisms, the empirical studies available from the relevant community, and legal and ethical issues associated with these agents. Much of the discussion was placed around the data illustrated in the Pennsylvania State University study, "The Advantages and Limitations of Calmatives for Use as a Non-Lethal Technique," published in 2001.

The community acceptance panel convened a broad representation of community members. It was populated with practitioners from the medical, research, legal and ethical communities.

Currently, the law enforcement community is using electro-muscular disruption (EMD) devices as the most viable and less lethal option to deal with hostile environments within the local criminal justice/law enforcement arena. The continued use of EMDs was not negated by the panel, but there are situations, such as hostage situations, where EMDs are not a good or available option.

There have been more than 200 incidents of death reported proximal to the use of EMDs, but in a large number of these incidents, the EMDs were not found to have been a factor in the deaths according to death investigators. Therefore, with more than 184,000 devices currently in use, EMDs have been adopted widely by law enforcement with positive outcomes in a wide variety of circumstances. The panel discussed that in cases where the suspect was on drugs and/or experiencing a state of excited delirium, EMD use may cause medical concerns. Research is currently being conducted on the causation of these deaths

and how to potentially foresee them or counteract negative results. Also, additional research is underway on the use of impact munitions and other less lethal alternatives.

The group was tasked with assessing the potential of developing new riot control agents (RCAs), such as chemical calmatives, as a viable addition or alternative to the law enforcement less lethal arsenal. Such less lethal options would be delivered in situations and in a manner similar to pepper balls or OC (Oleoresin Capsicum), except the resulting effects would be designed to calm rather than irritate the target.

It was made clear that NIJ has not yet funded the development or testing of any technology in this area, other than to convene this panel meeting. NIJ does not endorse a particular technology. We as an organization want to provide the community with the best science/research so law enforcement can make sound decisions.

Discussions

The presentations focused on the very real need for alternative less lethal options for law enforcement and for the ongoing safety and protection of law enforcement officers, suspects and the community at large. All agreed that there is very little research and development money available for domestic law enforcement. Law enforcement relies on the federal government for research studies. Unfortunately, these studies can sometimes take a long time and seeing the results or developing a tool can take even longer.

It was agreed by the group that a common or consistent nomenclature for discussion of these technologies, both in the meeting and in the community, is needed. A consensus glossary should be developed.

The panel mentioned a potential new tool for law enforcement called the Active Denial System or "pain ray." It is a ray made of millimeter waves that are launched for a few seconds from more than 500 meters away. This device may be useful in prison riot situations, however additional research is needed.

Mr. Heal, while advocating for the potential use of calmative agents if a viable option became available, suggested that chemical calmatives might be more effective and better suited for hostage situations than for crowd or riot control situations. The general consensus was that calmatives would not be indicated for mass demonstrations as the optimal delivery method is nondiscriminatory. But unlike riot situations, under certain circumstances, when a hostage situation becomes tactical, the protocol is to kill the hostage taker in the ongoing mission to protect the lives of the innocents. If a less lethal alternative became available that would spare the life of the hostage taker as well, law enforcement would certainly opt for it. Even if there were some potential side effects, in a hostage situation, medical personnel could be on site for any medical issues that arose. At the point that these situations become tactical, the hostage taker is presumed dead, hence, a less lethal alternative is preferable to loss of life.

The ideal chemical agent would put the hostage taker to sleep without harming the innocents nearby. After the situation was under law enforcement's control, and the suspect was in custody, the suspect could then be awakened in a safe environment.

Dr. Kenny gave a presentation regarding the 2001 study conducted by Penn State University that investigated the advantages and limitations of using pharmaceutical agents as calmatives. The study focused on carfentanil (used to sedate large animals via darts), which is delivered intramuscularly, intravenously and orally and has a known antidote. However, the agent is an opioid and has some undesirable side effects including respiratory depression that can be fatal. It was suggested that additional candidate agents may be identified by looking at the pharmaceutical industry for cast-off drugs or other research options that may have come into play since this research was undertaken seven years ago. There may also be new developments within the pharmaceutical industries of which the

panel is not aware. All were interested in assessing the present state of research in this area.

Based on discussions regarding the Penn State study and information provided by Dr. Benjamin during the toxicology presentation, the group identified/reaffirmed the issues that needed to be fully researched: the appropriate chemical/sedative that would serve in this capacity (that no one was sure currently exists); the appropriate dosage (suspect may be on medication or drugs already); method(s) of delivery, such as ingestion, inhalation, absorption through the skin and injection (and whether delivery needs to be done by a medically trained officer); and how the calmative may effect others in the immediate area.

The entire panel supported research as the first step. The research would explore alternative options, as consensus was reached that options are needed. Any research performed is entered into with no preconceived outcome in mind. There may be no safe option available based on drugs currently available within the medical/pharmaceutical community, or a safe drug may be found, but there may be no viable delivery mechanism. For example, most of the panelists were aware of the Dubrovka Theater siege in October 2002 when Russian Special Forces used a calmative agent to subdue Islamist Chechens who were holding 850 hostages in a Moscow theater. More than 120 hostages and terrorists died from the drug's effects and collateral effects. This was not the intended outcome foreseen by law enforcement.

There was also discussion regarding the importance of not overstating the potential capabilities of these less lethal alternatives and that all research/outcomes must be openly discussed and disclosed. It was agreed by all that transparency of the process is essential.

Ideally, in order to use calmative agents as a less lethal technology option, the agent would have to:

- Have fast onset.
- Produce similar effects and of the same magnitude in all individuals of similar body mass index and age range.
- Have a short or limited duration.
- Have reversible effects.
- Have no prolonged toxicity.
- Be easy to store and administer.

Miami Dade Experience

Dr. Hyma spoke to the panel about a new technique currently being implemented in Florida. In Miami Dade County there were 277 fatal police shootings between 1979 and 2006. Miami Dade began implementing EMDs as a supplemental law enforcement tool in 2001, after which they saw a drastic drop-off in the number of fatal police shootings from 2001-2006. In response to public protest to the EMD implementation, a focus group was put together to address the use of Tasers in 2003.

It was found that if a person is on drugs and begins to show symptoms of excited delirium, that person's body temperature increases. For example, once a person who ingested cocaine has a body temperature that rises above 104°F, they usually cannot be resuscitated and eventually die from organ failure.

Alternatively, Versed was recommended for nasal inhalation, but law enforcement would have to be trained to recognize these incidences as a medical emergency so emergency medical services and law enforcement could respond to the scene together. EMDs would be implemented if necessary. Once the suspect was successfully subdued, the suspect would be restrained, and Versed would be nasally administered by medical personnel on site, iced saline would be administered via IV to control body temperature and the subject would be

taken to the emergency room. There have already been several successes with this protocol.

Dr. Benjamin provided the panel with information regarding the potential medical pitfalls that may arise when using a calmativ agent. For example, although an antidote may exist for a drug introduced into the body for calming purposes, there is always a risk that a suspect may die from collateral or ancillary reasons before an antidote can be administered (e.g., drug overdose, temperature spike, aspiration, trauma from falling). Neither Dr. Benjamin nor the panel was aware of any ideal calming agent currently available. Unfortunately, only 1 of 10 drugs in development moves on to clinical trials. Once there, it can cost \$500 million and take 5-8 years after chemical synthesis with no guarantee of approval. It is clear that any option suitable for law enforcement use would have to be based on a pharmaceutical already in existence and FDA-approved. There was discussion whether a pharmaceutical already on the market in one form could be altered for use in another form. For example, could a drug that exists in pill form be used in an aerosol version? But again, this is an area that requires research as no answers are currently available.

Other related issues discussed by the panel and associated pros and cons:

PROS	CONS
Chemicals will sedate people	They won't sedate immediately/rates of onset
Relatively safe when used in controlled situations	When not regulated, it could cause respiratory depression
Available by standard prescription	May require oral, IV or IM administration
Commonly and successfully used with individuals	Has not been designed for groups of people of different mass and/or sex

Classes of drugs that may have utility as calming agents include:

1. Opiates.
2. Antipsychotics.
3. Neurolept Anesthesia.
4. Ketamine.
5. Benzodiazepines.
6. Rohypnol (date rape drug).
7. Non-Benzodiazepines (Ambien).

Several public policy issues were identified, including:

1. What measures would be taken to address the psychosocial response following the use of chemical agents?
2. Is there adequate information on the epidemiology of the use of chemical agents? (e.g., can effects spread to others?)

3. Although the FDA regulates the approval of pharmaceutical drugs for medical uses, there is currently no body that defines the parameters of acceptability for these types of agents for law enforcement use.
4. Would there be an adequate supply of the identified agent?
5. Who would pay for the development of the agents?
6. Is the pharmaceutical industry gearing up to ensure that there would be an adequate supply of antidotes?

In addition to public policy concerns, Marian Daggett educated the panel on the legal concerns that should be considered before a chemical option can be implemented, if one was identified as viable:

1. A riot control agent must be intended for lawful use.
2. It must be able to distinguish between targets of concern and the general population.
3. Dosage should be no more than absolutely necessary, proportionate to achieving the lawful purpose.
4. To pass a legal review, the distribution method will have to be considered.
5. Whether private vendors could invest in research to assess these types of agents.
6. International/political concerns must be taken into account, for example, even if a particular agent were deemed legal in the U.S., it must be determined whether its use would violate any international treaties, conventions, protocols or principles (to which the U.S. is a party).
 - a. International principles governing weapons:
 - i. The Hague Convention (1907) prohibits the use of poison.
 - ii. The Geneva Gas Protocol (1925) distinguishes between international combat and domestic control of a country's own citizens.
 - iii. The Biological Weapons Convention (1972) prohibits the use of biological agents and toxins.
 - iv. The Nairobi Convention (1986) restricts electromagnetic weapons and is implemented in U.S. Code.
 - v. The Chemical Weapons Convention (1993) prohibits riot control agents used for warfare. However, law enforcement, including domestic riot control, is not a prohibited use.

The consensus among the panel members was that once identified for law enforcement use, the "ideal" agent would be something that could be administered by law enforcement and not medical personnel. This may not be a viable option and medical personnel may need to be a required part of a "team" when these agents are going to be used.

It was reiterated that the goal of using these types of agents is to *improve* the less than perfect outcomes that are presently occurring around the country with the law enforcement tools currently available. In some situations, containment may be the goal, and in other scenarios the goal may be to break up a crowd of individuals. Different scenarios must be considered if research is done. Also, combinations of agents (e.g., calmatives + security fog or other substances) should be investigated.

Any consideration of research should not be done in a vacuum. Since the goal in identifying an appropriate agent is to find something that will have a sedation/incapacitation effect, short of being lethal, it was suggested that the EPA data on acceptable levels of environmental toxins may be helpful in guiding appropriate levels of calmative agents for law enforcement use. Additionally, the surgeon general has considered these issues already and may have useful information. Could DOJ/NIJ be the bridge between the law

enforcement community, the medical and research community, and the private pharmaceutical and tactical vendors?

Conclusion

The general consensus of the panel members was that this may or may not be a safe or viable option for law enforcement, but all saw this as a reasonable area in which to attempt new or update existing research. Research in this area would provide the general community with a better understanding of the options, short comings or issues in this area and determine whether the viability of an unrealized tool like this exists. No one was prepared to make a determination as to whether a tool could be developed to work in a safe way, only that research was certainly an acceptable next step.

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