

Examining Violent Prone Restraint Incidents in Policing

Darrell L. Ross, Ph.D.

AELE Webinar References

- Baldwin S, et al. (2018). Excited delirium syndrome (ExDS): Situational factors and risks to officer safety in non-fatal use of force encounters. *International Journal of Law and Psychiatry*, 60:26-34
- Baldwin S, et al. (2016). Distinguishing features of excited delirium in non-fatal use of force encounters. *Journal of Forensic and Legal Medicine*, 41:21-27.
- Barnett R et al. (2013). The physiological impact of upper limb position in prone restraint. *Medical Science and Law*, 53: 161-165.
- Bozeman, WP, Stopyra JP, Martin BP, Graham DD, Johnson JC, Mahoney-Tesoriero K, Vail, SJ (2018). Injuries associated with police use of force. *Journal of Trauma Acute Care Surgery*, 84 (3):466-472.
- Brave M (2020). Law enforcement use of force standards, degrees of certainty, and scientific reliabilities. *Government Liability, Accountability; For the Defense*, 24-30.
- Carson EA, Cowhing MP (2020). *Mortality in local jails: 2000-2016, Statistical tables*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.
- Cary, N. et al. (1999). Evaluation of simulated resistance in the prone position on cardiorespiratory function following exercise in humans. *Respiratory and Human Physiology*, 30, 525.
- Chan TC, Neuman T, Clausen J, Eisele J, Vilke GM (2004). Weight force during prone restraint and respiratory function. *American Journal Forensic Medicine Pathology*; 25:185-9.
- Chan TC, et al (2002). The effects of oleoresin capsicum, pepper spray inhalation on respiratory function. *Journal of Forensic Science*, 47 (2):299-304.
- Chan TC, Vilke GM, and Neuman T (1998). Reexamination of custody restraint position and positional asphyxia. *Am J Forensic Medicine Pathology*, 19:201-5.
- Chan TC, Vilke GM, Neuman T, and Clausen JL (1997). Restraint position and positional asphyxia. *Ann Emerg Med*, 30:578-86.
- Davis E, Whyde A, and Langton, L (2018). *Contacts between police and the public, 2015*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.
- DiMaio TG and Di Maio JM (2006). *Excited delirium syndrome: Cause of death and prevention*. Taylor and Francis Group, CRC Press, Boca Rotan, FL.
- Durose MR, Smith EL, Langan PA (2005). *Contacts between police and the public, 2007*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.: 1-32.
- Durose, MR, Schmitt, EL, Langan PA (2002). *Contacts between police and the public, 2005*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.
- Eith C & Durose, MR (2011). *Contacts between police and the public, 2008*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.
- Eisele JW, et al. (2000). Comparison respiratory function in the prone maximal restraint position with and without additional weight force on the back. Paper presented at the annual American Academy of Forensic Science conference, Reno, NV, 1-4.
- Graham, MA (2014). Investigation of deaths temporally associated with law enforcement apprehension. *Academy of Forensic Pathology*, 4: 366-389.

Examining Violent Prone Restraint Incidents in Policing

Darrell L. Ross, Ph.D.

AELE Webinar References

Glatter K, Karch SB. Positional asphyxia: inadequate oxygen, or inadequate theory? *Forensic Sci Int.* 2004;141(2-3):201-202.

Hall, C, Votova, K, Heyd C, Walker B, MacDonald S, Eramian D, and Vilke GM (2015). Restraint in police use of force events: Examining sudden in custody deaths for prone and not-prone positions. *Journal of Forensic and Legal Medicine*, 1-19.

Hall CA, McHale AMD, Kader AS, Stewart LC, MacCarthy CS, Fick GH (2012). Incidence and outcome of prone positioning following police use of force in a prospective, consecutive cohort of subjects. *Journal Forensic Legal Medicine*, 19: 83-9.

Ho JD, Dawes DM, Moore JC, Caroon LV, Miner JR (2011). Effect of position and weight force on inferior vena cava diameter: Implications for arrest-related deaths. *Forensic Science International*, 212; 256-259.

Hyland S, Langton L and Davis E (2015). *Police use of nonfatal force: 2002-2011*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C.

Johnson RR (2016). *Dispelling the myths of surrounding police use of lethal force*. Dolan Consulting Group, www.DolanConsultingGroup.com

Krauskopf A, et al. (2008). Does weight force application to the lower torso have an influence on inferior vena cava and cardiovascular parameters? *The American Journal of Emergency Medicine*, 26:603-607.

Kroll MW and Brave M (2020). Defending non-firearm arrest-related death incidents. *International Municipality Lawyers Association*. 2020 Mid-Year Seminar, Washington, D.C., 1-19.

Kroll MW, Brave MA, Kliet SR, Ritter MB, Ross, DL, and Karch, SB. (2018, December). Applied force during prone restraint: Is officer weight a factor? *American Journal of Forensic Medicine and Pathology*, 1-7.

Kroll MW, Still GK, Neuman TS, Graham MA, and Griffin LV (2017). Acute forces required for a fatal compression asphyxia: A biomechanical model of historical comparisons. *Medicine, Science, and the Law*, 0:1-8.

Karch, SB (2016). The problem of police-related cardiac arrest. *Journal of Forensic and Legal Medicine*, 41: 36-41.

Langton PA and Durose MR (2016). Police behavior during traffic stops, 2011 (2013). US Department of Justice, Bureau of Justice Statistics, Washington, D.C.

Lasoff DL, Hall CA, Bozeman WP, Chan TC, Castillo EM and Vilke GM (2017). Prone: Outcomes of use of force followed with prone restraint. *J Forensic Med.*, 1-3.

Levine S, et al. (2005). Cardiac monitoring of subjects exposed to the TASER. *American Emergency Medicine*, 33(2): 113-117.

Maruschak LM, Berzofsky M (2016). *Medical problems of state, federal and jail inmates: 2011-2012*. US Department of Justice, Bureau of Justice Statistics, Washington, D.C. 1-23.

Meredith C, Taslaq SM, Kon OM, and Henry J (2005). The cardiopulmonary effects of physical restraint in subjects with chronic obstructive pulmonary disease. *Journal of Clinical Forensic Medicine*, 12:133-136.

Michalewicz, BA, Chan, TC, Vilke GM, Levy, SS, Nueman, T and Kolkhorst, FW (2007). Ventilatory and metabolic demands during aggressive physical restraint. *Journal of Forensic Science*, 52:171-175.

Examining Violent Prone Restraint Incidents in Policing

Darrell L. Ross, Ph.D.

AELE Webinar References

National Center Health Statistics (2018). *Compressed mortality file: 1968-2017*. Center for Disease Control and Prevention, Atlanta, GA.

National Emergency Number Association. 9-1-1- Call Volume. www.NENA.org

Neuman, T (2006). Positional and restraint asphyxia. In, Ross, DL and Chan, TC, *Sudden Deaths in Custody*. Humana Press: 39-57.

Reay DT, Howard JD, Fligner CL and Ward RJ (1988). Effects of positional restraint on oxygen saturation and heart rate following exercise. *American Journal of Forensic Medicine and Pathology*, 9:16-18.

Rogella, M, et al. (1997). Cardiorespiratory consequences to hobble restraint. *Wien Klin Wochenschr*, 109: 359-361.

Ross, DL (2019). Examining the liability issues associated with prone restraint deaths in detention. *Forensic Research and Criminology International Journal*, 7 (3):109-118.

Ross, DL and ML Hazlett (2016, January). A prospective analysis of the outcomes of violent prone restraint incidents in policing. *Forensic Research and Criminology International Journal*, 2: 1-10.

Savaser D and Chan TC (2018). Positional and restraint asphyxia. In Ross, DL and Vilke, GM, eds., *Guidelines for investigating officer-involved shootings, arrest-related deaths, and deaths in custody*, chp. 7. Routledge Publisher, NY.

Savaser DJ, Campbell C, Castillo EM, Vilke GM, Sloane C, Neuman T, Hansen, AV, Shah, V and Chan TC (2013). The effect of prone maximal restraint position with and without weight force on cardiac output and other hemodynamic measures. *Journal of Forensic and Legal Med*, 1-22.

Schmidt P and Snowden T (1999). The effects of positional restraint on heart rate and oxygen saturation. *Journal of Emergency Medicine*, 17:777-82.

Sloane, C, Chan,TC, Kolkhorst, F, Nueman, T, Castillio, EM, Vilke, GM (2014). Evaluation of the ventilatory effects of the prone maximum restraint (PMR) position on obese subjects, *Forensic Science International*, 27: 1-9.

Snyder HN (2012). *Arrests in the United States, 1980-2009*. US Dept. of Justice, Washington, D.C., Bureau of Justice Statistics.

Vilke GM et al. (2009). Evaluation of the ventilatory effects of restraint chair on human subjects. *Journal of emergency Medicine*, 20 (10): 1-5.

Vilke GM, et al, (2007). Physiological effects of a conducted electrical weapon on human subjects. *Annals of Emergency Medicine*, 50 (50): 569-575.

Vilke GM, Micalewicz B, Kohlkorst F, Nueman T, Chan TC (2005). Does weight force during physical restraint cause respiratory compromise? *Academy of Emergency Medicine*, 12:16.

Vilke GM, et al. (2000). Spirometry in normal subjects in sitting, prone, and supine positions. *Respiratory Care*, 45 (4):407-410.