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Tom Steenson, Attorney at Law
500 Yamhill Plaza Building
815 S.W. Second Avenue
Portland, Oregon 97204-3005

Re: Chasse v, Humphreys, et al. Case No. CV-07-189-HU

Dear Mr. Steenson and Mr. Schneiger:

CONSULTATION REPORT

You first contacted me in November of 2009, requesting that I review materials concerning the death in custody of Mr. James Chasse, including other physicians' written reports. You wanted my insights as a physician, forensic pathologist and medical examiner into the probable cause of his death and whether excited delirium syndrome (EDS) contributed to causing death.

Forensic Pathology Qualifications

My opinions are based on my knowledge, training, experience, research, and critical examination of the materials you sent me. I am a physician, licensed to practice medicine in California and Oregon, and certified by the American Board of Pathology in the medical specialty of anatomic pathology and the subspecialty of forensic pathology. I have worked full-time as a forensic pathologist and medical examiner for the past 31 years, having personally performed nearly 8,000 complete autopsies. I have been interested in the subject of death associated with custody restraint, have researched the topic, conducted autopsies in such cases, consulted, lectured and published scientific medical papers on the subject. You have copies of my curriculum vitae, fee schedule and testimony list for the last several years.

Materials Reviewed

I have reviewed the following items you sent regarding Mr. Chasse's death prior to writing this report and have used them as a basis for this report:

1. AMR Prehospital Care reports (NW and NE Portland incidents)
2. Portland Fire incident reports (NW and NE Portland incidents)
3. Confidential Clinical AMR Investigation
4. Providence Hospital ER records with summary by Carlos Sanchez, MD (emergency medicine)
5. Deposition of Dr. Carlos Sanchez (emergency medicine) on 8/6/08
6. Oregon State Medical Examiner investigation, autopsy and ancillary reports
7. Autopsy photos
8. Incident scene photo and miscellaneous other subject photos
9. Second autopsy and expert opinion by Dr. William Brady (forensic pathologist and former Oregon State Chief Medical Examiner) – 11/2/06
10. Portland Police Internal Affairs taped statement of Dr. Gunson - 5/22/07
11. Dr. Karen Gunson (forensic pathologist and current Oregon State Chief Medical Examiner) deposition – 7/2/08
12. Two postmortem whole body CT scan reports (dated 11/24/06 & 8/23/09) by Gerald Wamock, MD (radiologist)
13. Multnomah County Jail video with audio
14. Declaration of Tamara Hergert (paramedic at NW scene) – 12/8/08
15. Declaration of Kevin Stucker (paramedic at NW scene) – 12/8/08
16. Dr. Tom Neuman (emergency medicine) report – 10/15/09
17. Dr. Vince Di Maio (forensic pathology) report – 10/23/09
18. Dr. Richard Maunder (internal, pulmonary & critical care medicine) report – 12/17/09
19. Dr. Seth Isenberg (general surgeon) report – 10/22/09
20. Dr. William Long (cardiothoracic surgeon & Trauma Medical Director at Emanuel Hospital) report - 8/28/09
21. Dr. Judy Melinek (forensic pathologist) report – 10/19/09
22. Dr. John Moorhead (emergency medicine) report – 10/20/09
23. PPD Chasse arrest and custody reports
24. Gresham PD Officers Beetham and Harley Special Reports
25. Multnomah County Sheriff Officer Hubert Information Report
26. PPD Officer Gonzalez Special Report
27. Nurse Gayman Information Report (Multnomah County Jail nurse)
28. PPB IAD Timeline of 9/17/06
29. Timeline of events on 9/17/06 with cited records of:
    - Portland Police PPD Officers Humphreys and Nice
    - Multnomah County Deputies Burton, Hollenbeck, Hubert and McElhaney
    - Multnomah County Corrections Nurse Eath
    - AMR Paramedics Hergert and Stucker
    - Portland Fire Bureau PBF Koppy and Reeb
    - Civilian witnesses Anderson, Carter, Doolan, Gaylord, Ginsberg, Glanz, Lilligaard, Loghry, Marquez, Olson, Stuart, Wickemeier and Williams

If more substantive information is found, developed and disclosed to me concerning Mr. Chasse's death, my opinions expressed below may change.

Circumstances of Death and Postmortem Examination Summary:

James Chasse was 42 years old, 5'10" tall and weighed approximately 145 pounds at death. He suffered from schizophrenia for more than twenty years, having been diagnosed when he was a teenager. He reportedly had not been taking his antipsychotic medication consistently in the weeks before his death.

NW Portland takedown and arrest:
The following account is according to police and civilian witnesses in Northwest Portland.

- On September 17, 2006, the day of his death, Mr. James Chasse was approached by police officers in NW Portland during daylight hours at approximately 5:18 p.m. He appeared frightened according to the officers and more than a dozen civilian witnesses. Mr. Chasse began to walk rapidly away with an odd gait as police approached. Officer Humphreys ran a short distance and tackled or pushed Mr. Chasse around the chest area from behind, causing him to fall forward to the pavement and land in a prone position. Most describe Officer Humphreys landing on top of Mr. Chasse.
- A struggle lasting up to four minutes involving three police officers and Mr. Chasse followed the takedown. According to witnesses and police, it included police punches to his face; punches and kicks to Mr. Chasse's torso, front and back, and impacts to the back of his head. A kick or stomp was delivered to his chest over the sternum. His left arm was twisted backward in a "straight elbow lock arm bar" hold while an officer's foot or knee compressed the back of his left shoulder. Officer Nice thought Mr. Chasse's shoulder may have been dislocated. Witnesses described Mr. Chasse as crying, squirming, screaming in pain and begging officers to stop hurting him. He was shocked a number of times with a Taser in drive-stun mode.
- Officers had Mr. Chasse prone on the pavement and held him down with their knees, arms, hands and feet while handcuffing him behind his back and hobbling his lower legs with a strap. About four minutes elapsed from the time he was tackled until the time his legs were hobbled.
- While still being held down and shortly after Taser use, some witnesses described Mr. Chasse as appearing to have stopped moving, stopped breathing, or appearing unconscious. Officers also noticed that he was no longer talking, that he wasn't moving, appeared unconscious, and looked like he wasn't breathing after they got off his torso. At 5:23 p.m. Officer Nice called for medics "code 3" because Mr. Chasse appeared to be unconscious or not breathing. Forty-five seconds later Officer Nice called again, saying the suspect was now conscious (after an officer nudged him with a foot) and indicated the emergency response could be downgraded to code 1. Estimates of how long Mr. Chasse was unconscious ranged from 30 seconds to several minutes.

First emergency response (NW Portland):
AMR ambulance medics arrived first, followed shortly by Portland Fire Bureau. A cursory medical assessment reported near-normal blood pressure, heart rate and respiratory rate. Mr. Chasse seemed confused and in pain; had blood on his face, but spoke coherent words. He seemed fearful when police declined medics' offer to bring him to the hospital. Civilian witnesses were surprised, given Mr. Chasse's apparent condition, when he wasn't placed on a stretcher for medical transport.

Police transport & County Jail activities:

- When police picked Mr. Chasse up by his restraints and carried him prone to a squad car, he screamed and squirmed as if in pain, asking not to be touched, asking what he had done and asking for mercy. He was placed in the backseat of the police car and secured with the seatbelt, still handcuffed and hobbled.
- Officers Humphreys and Burton left the scene with Mr. Chasse about 20 minutes after his restraint and brief loss of consciousness. During the four minute drive to jail, he talked rapidly, asked for water, told officers his name and date of birth, and mentioned the drug *Mellaril*. He was not yelling or screaming like he was when he was carried to the car. Officer Humphreys ran a computer name check on Mr. Chasse during the trip, finding information supporting the perception that he was mentally ill.
- At the Multnomah County Sheriff Jail sally-port, blood was dripping from Mr. Chasse's face. When his seatbelt was removed he fell over on the car seat. Officer Humphreys had a spit sock placed over his head. Two deputies and two Gresham PD officers witnessed the difficulty getting Mr. Chasse out of the police car in his condition. Mr. Chasse yelled to get the handcuffs off and asked for help as he was dragged out of the back seat, feet first. Officers again carried him prone by his extremities and bindings, wiggling and moaning in apparent pain, through the videotaped booking area, and placed him prone on the floor of the "separation cell".
- In the cell the hobble and cuffs were removed and Mr. Chasse then lay relatively quietly. He again appeared to have lost consciousness and stopped breathing. A jail deputy saw what appeared to be a 10 to 15 second shaking episode, like a seizure. Jail nurses were called. Two nurses responded and viewed Mr. Chasse through the cell window. One saw what appeared to be another 5 second seizure. The nurses indicated that they would not clear him medically to stay at the jail. The nurses said he should go to a hospital and did not further examine him. Officers reapplied handcuffs and leg irons were attached. He was again carried prone by his bindings by four officers out of the cell, through booking and to the sally-port. He again yelled and groaned in apparent pain as he was carried.

- Mr. Chasse was again seat-belted in the backseat of the police car. He was observed leaning against the door, breathing rapidly. As they drove away, he made unintelligible sounds but was not screaming. A few minutes into the drive Officers noticed Mr. Chasse was quiet, wasn't moving and wasn't breathing. Six minutes after leaving the jail they called for medics to respond to their location in NE Portland where they had pulled off the freeway. Three minutes after that call they had removed Mr. Chasse from the car and radioed that they started chest compressions (but no rescue breathing). They removed the spit sock from around his head and Officer Burton used his finger to removed pooled blood from his mouth.

Second emergency response (in NE Portland) & at Providence Hospital:

- A passer-by had an AED, applied it to Mr. Chasse, and it indicated "no shock advised". He noticed that Chasse's chest looked depressed on the left side and he thought he felt fractures.
- AMR paramedics and a PFD engine arrived at 6:34 p.m. No chest compressions or other CPR was being done when they arrived. The patient was unconscious, not breathing and had no pulse. They noticed that Chasse's chest wall seemed to lack compliance and felt "squishy". They started CPR, placed an IV line, administered ALS medications and intubated for artificial breathing. The initial EKG indicated asystole. Enroute to the hospital a chaotic, wide complex rhythm was detected and they thought he had a weak carotid pulse. A "more normal" sinus rhythm was observed in the Providence Hospital parking lot. He arrived at the ER at 6:52.
- In the ER Mr. Chasse was deeply comatose with a GCS of 3 (lowest possible score). The ER doctor (Carlos Sanchez, MD) had no history of the traumatic events in NW Portland or at the jail. The patient had no pulse and was not breathing on his own. CPR resumed and he was defibrillated. The cardiac monitor indicated a wide complex rhythm with a rate of 30, but he still had no carotid pulse. Since resuscitation attempts had been going for more than 30 minutes with no appreciable response, the chest compressions and artificial breathing were terminated and Mr. Chasse was pronounced dead, twelve minutes after arriving in the ER, at 7:04 p.m. At the bedside after death some subcutaneous emphysema and a left flail chest were noticed. Dr. Sanchez inserted a 16 gauge angiocatheter needle in the upper left chest and detected no rush of air, suggesting there might not have been a tension pneumothorax.

Medical Examiner autopsy, investigation and testimony:

- The day after death Dr. Karen Gunson, Oregon State Chief Medical Examiner, conducted an autopsy on the body of Mr. Chasse. It revealed a multitude of abrasions and contusions of his head; anterior and posterior trunk; both arms and both legs. Blood was in his nose. She observed internal contusions; left hemothorax; numerous, bilateral, parasternal rib

fractures; left lateral rib fractures; fractures of almost all of the left ribs posteriorly near the spine, and fractures of many of the right ribs posteriorly near the spine. All of the fractures had fresh hemorrhage in surrounding soft tissues and muscle and, especially posteriorly and laterally, the hemorrhage was extensive. Many of the rib fractures were displaced to the point of puncturing the parietal pleura and several of the posterior left rib fractures had punctured the lung. Toxicology was negative. More than 100 photos documented the injuries.

- The cause of death was certified as "Blunt Force Chest Trauma". Dr. Gunson testified that she discussed the case and findings with three of her experienced forensic pathologist associates and they all agreed with her assessment of the cause of death.
- Dr. Gunson answered questions during a tape-recorded interview by PPD Internal Affairs officers eight months after the death; testified at a criminal grand jury hearing, and testified at a civil deposition almost two years after the death of Mr. Chasse. During these she discussed her opinion that the parasternal fractures were probably caused by CPR manual chest compressions. She elaborated on an observation, voiced while removing the chest plate during the autopsy, that Mr. Chasse's ribs seemed "brittle". She discussed a hypothesis or theory that when Mr. Chasse was tackled he fell hard onto the pavement with the heavier tackling officer landing on Mr. Chasse's chest, causing the left lateral and the posterior rib fractures. She said the anterior rib fractures were much more numerous than usually seen from just CPR and that the other fractures were not from CPR.
- Those three recorded/transcribed events indicated that the Medical Examiner was not aware of some of what happened to Mr. Chasse during the hour-long police encounter before death.

Second autopsy by William Brady, MD – 11/2/06

A second autopsy a month and a half later generally confirmed the injury findings of the first autopsy. Additional findings documented included:

- Extensive hemorrhage around a comminuted fresh jagged fracture of the lateral part of the left clavicle.
- The left 1st and 2nd ribs fractured posteriorly adjacent to the spine with hemorrhage. The 2nd rib was also fractured and bled laterally, in the axillary area.
- Posterior right ribs 1-3 were mobile with hemorrhage in the surrounding soft tissue. Posterior right ribs 4-6 appeared to have small healing calluses.

Dr. Brady disagreed with the opinions of Drs. Di Maio and Melinek as to the cause of death. After review of multiple reports, his opinion to reasonable medical certainty was that Mr. Chasse died from blunt force trauma.

Postmortem CT scan - 11/24/2006 - by radiologist Gerald Warnock, MD

Over 2 months after death a CT scan was done at Epic Imaging and interpreted in two reports. Dr. Warnock found no evidence of osteoporosis or other bone

mineralization disease. He confirmed Dr. Brady's findings of a distal fresh comminuted fracture of the left clavicle; the posterior fracture of the left 1st rib and the axillary fracture of the left 2nd rib, and evidence of healing of paravertebral fractures of right ribs 4-6.

Opinions and Discussion

Cause of death

I agree with the opinion of the Chief Medical Examiner that the underlying cause of Mr. Chasse's death was as indicated on the death certificate she signed – "Blunt Force Chest Trauma".

I respectfully disagree with Dr. Neuman's opinion expressed in his report that the bulk of the rib fractures were likely due to chest compressions during CPR. I also disagree with Dr. Di Maio's opinion expressed in his report that the parasternal rib fractures were without a doubt due to CPR and that the left lateral rib fractures were most likely due to CPR. Given the admission by police and confirmation by civilian witnesses that an officer kicked or stomped on Mr. Chasse's chest over the sternum at least once, one must at least entertain the reasonable possibility that some of the parasternal rib fractures could have been caused directly by police actions in NW Portland. Since the amount of force that can be generated by a kick or a stomp is much greater than the force generated by CPR chest compressions, I think it is possible that at least some of the extensive parasternal fractures happened during the initial takedown and struggle. I agree with the medical examiner that the left lateral fractures and the posterior rib fractures were not due to CPR, but rather were sustained in the NW Portland takedown, struggle and restraint process.

I agree with the opinions expressed in the report dated 12-7-09 by Dr. Richard Maunder. The witnesses' reported observations of what happened to Mr. Chasse; Chasse's reported physical response and behavior over the following hour, and the postmortem autopsy findings of extensive acute chest trauma are all consistent with the chest injuries being the probable cause of death.

The probable mechanism of death was a combination of progressive internal bleeding causing hypovolemic shock, coupled with respiratory insufficiency. The respiratory insufficiency was probably due partly to pain during breathing caused by so many broken ribs; partly by functional loss of some of the bellows effect, also caused by broken ribs, and partly by loss of functional pulmonary gas exchange. The loss of functional gas exchange was probably from bleeding into the lungs caused by blunt force contusions, rib fracture punctures, and from atelectasis (partial collapse) of the left lung. The fact that the Medical Examiner did not describe pulmonary contusions in the autopsy report does not mean they

were not present. The lungs were congested with blood, as they often are in deaths with CPR, and they had dependent lividity. The presence of pulmonary contusions, especially posterior contusions, is usually obscured by such vascular congestion.

James Chasse's injuries, through the mechanism of hypoxia alone, explain his eventual cardiac arrest and death. Hypoxia would be caused by the following injury mechanisms:

- Blood in his lungs from rib fracture punctures and pulmonary contusions reduced the effective alveolar surface area for oxygen diffusion into blood circulating through his lungs.
- Blood (from rib fracture punctures in lungs) that leaked into alveoli and bronchioles and was spread throughout the tracheobronchial tree by breathing movements, partially obstructed ventilation. This blood was difficult to remove by coughing because of pain and some degree of flail chest.
- Partial pulmonary atelectasis (from rib fracture punctures of the lung and blood in the pleural cavity).
- Decreased effective ventilation (ability to breathe deeply) from painful rib fractures (splinting).
- Decreased effective pulmonary volume caused by partial flail chest, blood in the respiratory tree, hemothorax and possible pneumothorax.
- Anemia and hypovolemia by blood loss (external bleeding from mouth, and internal bleeding into the pleural cavity and into multiple soft tissue injuries (bruises).
- Obstruction of the pharynx and larynx by blood clot (described as scooped out by police officer's finger sweep to clear the airway during the stop on the way to Adventist Hospital prior to or during police officer chest compressions).

Hypoxia alone can cause lethal cardiac arrhythmias. Respiratory acidosis from inadequate ventilation caused by the injuries can cause arrhythmias. Soft tissue crush injuries can cause hyperkalemia and arrhythmias.

Mr. Chasse's observed apparent loss of consciousness after the take down in NW Portland can be explained by restriction of chest wall movement by compression of his injured chest by the weight of police officers during restraint causing insufficient delivery of oxygen to his brain. The loss of consciousness and seizures in the jail cell can be explained similarly, with chest wall and lung injuries in a restricted prone position decreasing oxygen delivery to his brain.

Excited Delirium (Syndrome)

I respectfully disagree with Dr. Di Maio's opinion that excited delirium syndrome (EDS) was the cause of Mr. Chasse's death. I respectfully disagree with Dr. Melinek's opinion that EDS was a conjoint cause of death. I respectfully disagree

with Dr. Moorhead's report stating that EDS is a reasonable alternative explanation for this death.

"Excited delirium" is a poorly and variably defined condition, not widely used or accepted in the field of medicine generally or in the specialty of psychiatry specifically. It was coined in the early 1980's as an explanation for sudden deaths in men intoxicated with cocaine who died during or within minutes following restraint by police. The cocaine intoxication manifested itself as delirium with extremely aggressive physical exertion. Most of the death cases since then considered as possible examples of EDS have also been acutely delirious with extreme exertion; have been delirious from stimulant drugs or psychiatric disorders, and have also been restrained by police or medical/behavioral health workers at the time of sudden death. In many of the cases, details of the history of how they were restrained indicate the very real possibility that the method of restraint directly caused the loss of consciousness and death by compressional asphyxia, rather than any syndrome associated with their delirium causing death.

Most of the "clinical features" mentioned as common in EDS are missing in this case. For example, increased pain tolerance, extraordinary strength, sweating, tactile hyperthermia, lack of tiring, inappropriate clothing (near nudity), and aggression toward objects (especially glass) were not present in Mr. Chasse.

EDS is usually a diagnosis by exclusion, with minimal injuries or disease present in the decedent to otherwise explain death. The two most commonly proposed mechanisms for death from EDS are extreme *hyperthermia* or an "*adrenaline rush*" (the latter mechanism favored by Dr. Di Maio). There is no evidence or reason to believe Mr. Chasse was hyperthermic and no temperature was taken. Dr. Di Maio writes that the few minutes after maximal exertion is the "period of peril" during which adrenaline levels are highest and fatal arrhythmias are likely to occur. Yet, Mr. Chasse's heart didn't fatally stop until an hour after the most adrenaline generating, frightening period of exertion: the initial takedown, struggle, compression and application of restraints in NW Portland.

In most cases where there is a disagreement between experts over the competing diagnoses of EDS or restraint asphyxia there are minimal autopsy findings to explain death. In the case of Mr. Chasse's death, there is abundant autopsy evidence of injuries to explain death and a witnessed series of events that support the injury mechanism. There is no evidence that Mr. Chasse was delirious before the takedown by police. After the takedown, after injuries and after restraints being applied, Mr. Chasse was lucid enough in the police car while being transported to jail to answer questions appropriately.

The signs of confusion, delirium or agitation noticed after the injuries Mr. Chasse sustained are best explained by poor perfusion of his brain with oxygen due to the injuries affecting lung function and by severe pain caused by injuries. They are not best explained by excited delirium.

Summary

In my opinion, with a reasonable degree of medical probability, the cause of James Chasse's death was multiple blunt force injuries. Excited delirium syndrome was not present and did not cause or contribute to his death.

Sincerely,

Ron O'Halloran

Ronald L. O'Halloran, M.D.

Cc. Tom Schneiger, Attorney at Law