Issued by THE LABOR AND INDUSTRIAL RELATIONS COMMISSION

FINAL AWARD DENYING COMPENSATION
(Affirming Award and Decision of Administrative Law Judge)

Injury No.: 05-023443

Employee: Joe Ainsworth, deceased

Dependent: Linda Ainsworth

Employer: Branson R-IV School District

Insurer: Missouri Employers Mutual Insurance Company

The above-entitled workers' compensation case is submitted to the Labor and Industrial Relations Commission (Commission) for review as provided by section 287.480 RSMo. Having reviewed the evidence and considered the whole record, the Commission finds that the award of the administrative law judge is supported by competent and substantial evidence and was made in accordance with the Missouri Workers' Compensation Act. Pursuant to section 286.090 RSMo, the Commission affirms the award and decision of the administrative law judge dated July 28, 2008, and awards no compensation in the above-captioned case.

The award and decision of Chief Administrative Law Judge L. Timothy Wilson, issued July 28, 2008, is attached and incorporated by this reference.

Given at Jefferson City, State of Missouri, this 24th day of April 2009.

LABOR AND INDUSTRIAL RELATIONS COMMISSION

William F. Ringer, Chairman

Alice A. Bartlett, Member

DISSENTING OPINION FILED
John J. Hickey, Member

Attest:

Secretary

DISSENTING OPINION

I have reviewed and considered all of the competent and substantial evidence on the whole record. Based on my review of the evidence as well as my consideration of the relevant provisions of the Missouri Workers' Compensation Law, I believe the decision of the administrative law judge should be reversed.

I detail what I believe to be the sequence of events leading to employee's death. Employee was driving the school bus and conversing with Mr. McSpadden. At some point, employee stopped responding to Mr. McSpadden, although employee was still seated upright with his hands on the steering wheel. The bus gained speed and veered toward a sign. After getting no response when he called out to employee, Mr. McSpadden stood up from his seat and attempted to jerk the wheel to try to steer the bus away from a sign. Despite his effort, the bus hit the sign and Mr. McSpadden was thrown off the steering wheel. By the time Mr. McSpadden regained control of the wheel, the bus had crossed the median, crossed over the opposite highway lanes, and was rolling on the shoulder into oncoming traffic. Mr. McSpadden steered the bus into a ditch.

The bus was violently rocked such that Mr. McSpadden was thrown into the air, hit his head on the ceiling and fell to the floor. Employee flew over Mr. McSpadden's body. At some point, employee hit is head as evidenced by three subgaleal hematomas on his head. Employee landed on his right side with his body wedged about his chest or neck between a bus seat and the bar of a metal handrail. Employee's legs were on top of Mr. McSpadden. Mr. McSpadden wriggled out from under employee's legs, sat in the driver's seat and stopped the bus.

A passerby witnessed the bus accident and came to the bus to assist employee and Mr. McSpadden. Mr. McSpadden was of the impression that employee was having difficulty breathing due to his physical position. The passerby pushed employee's body from the front while Mr. McSpadden pulled employee's belt from the back. Mr. McSpadden did this in an effort to make it easier for employee to breathe. Employee remained so situated for approximately 18 minutes until emergency personnel could free him. The impression of paramedic Brandon Heupel, as written in his report, was that the weight of employee's body was pressing employee's neck against the bar and preventing employee from breathing.

There are two medical theories advanced for employee's death. Claimant contends employee died of asphyxiation from the compression of the metal bar on his body (positional asphyxia). Claimant contends that employee's heart was still beating until he became wedged between the bar and seat at which point his body position prevented him from breathing sufficiently. Employer contends employee died of sudden cardiac death while he was still in the driver's seat of the bus and that employee's heart stopped beating before he became wedged between the bar and the bus seat.

Dr. Norton believes employee's heart was still beating at the time he became wedged between the bar and the seat. The opinion of Dr. Norton persuades me in this matter. In particular, I am persuaded by Dr. Norton's explanation that the subgaleal hematomas on employee's head are evidence that employee's heart was still beating when he hit is head during the accident. Hematomas are caused by blood filling the site of an injury so blood pressure from some mechanism is necessary for their formation.

Dr. Nichols suggests two possible causes of the subgaleal hematomas. First, he suggests gravity could bring blood to the site of the injury. Employee's position on his side with his head tilted upright makes this cause implausible. Second, Dr. Nichols suggests that CPR could create enough blood pressure to allow blood to leak into the injury. Dr. Nichols testified that CPR results in blood pressure that is approximately twenty-five percent (25%) of that produced by a properly functioning heart. I do not believe this minimal pressure created the hematomas reflected in the photos in evidence.

Dr. Belz relies on the absence of external markings on employee's neck in concluding that the cause of death was not asphyxia. He also identifies the lack of petechia as a minor factor in his conclusion, although

Dr. Belz agrees with the medical literature in the record that petechia is not always present with asphyxia and the absence of petechia does not eliminate asphyxia as a cause of death.

Dr. Norton's opinion that employee's heart was still beating is the most logical explanation for the subgaleal hematomas and the bruise on employee's esophagus. For that reason, I believe positional asphyxia caused by employee's position between the bar and the seat was the substantial factor in causing employee's cardiac failure and death.

The conditions of employee's workplace required him to drive on the highways at highway speeds in a school bus. The school bus had a metal handrail in front of the first seat of the bus. The speed of the bus caused the bus to rock violently when the bus left the roadway. The violent rocking sent employee through the air landing him between the bar of the handrail and the seat. Regardless the source of employee's initial non-responsiveness, it is clear the conditions of employee's workplace contributed to employee's accidental death by asphyxia. "[A] causal connection is established if the conditions of the workplace contributed to cause the accident, even if the precipitating cause was idiopathic." *Alexander v. D.L. Sitton Motor Lines*, 851 S.W.2d 525, 528 (Mo. banc 1993). Employee's death arose out of his employment.

Dependent has met her burden of proving she is entitled to benefits under the Missouri Workers' Compensation Law. I would award to her medical expenses, funeral expenses and death benefits.

I would reverse the award of the administrative law judge. For the foregoing reasons, I respectfully dissent from the decision of the majority of the Commission.

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John J. Hickey, Member

AWARD

Employee: Joe Ainsworth Injury No. 05-023443

Before the
DIVISION OF WORKERS' COMPENSATION
Department of Labor and Industrial Relations of Missouri
Jefferson City, Missouri

Dependents: Linda Ainsworth

Employer: Branson R-IV School District

Additional Party: N/A

Insurer: Missouri Employers Mutual Insurance Company

Hearing Date: March 31, 2008 Checked by:

FINDINGS OF FACT AND RULINGS OF LAW

1. Are any benefits awarded herein? NO

2. Was the injury or occupational disease compensable under Chapter 287? NO

3. Was there an accident or incident of occupational disease under the Law? NO

4. Date of alleged accident or onset of occupational disease: MARCH 24, 2005

5. State location where alleged accident occurred or occupational disease was contracted:
NEWTON COUNTY, MO

6. Was above employee in employ of above employer at time of alleged accident or occupational disease? YES

7. Did employer receive proper notice? YES

8. Did alleged accident or occupational disease arise out of and in the course of the employment? NO

9. Was claim for compensation filed within time required by Law? YES

10. Was employer insured by above insurer? YES

11. Describe work employee was doing and how alleged accident occurred or occupational disease contracted:
DRIVING SCHOOL BUS

12. Did alleged accident or occupational disease cause death? NO

13. Part(s) of body injured by accident or occupational disease: N/A

- Nature and extent of any permanent disability: N/A

15. Compensation paid to-date for temporary disability: N/A

16. Value necessary medical aid paid to date by employer/insurer? -0-

17. Value necessary medical aid not furnished by employer/insurer? N/A

18. Employee's average weekly wages: N/A

19. Weekly compensation rate: $273.40

- Method wages computation: STIPULATION

COMPENSATION PAYABLE

21. Amount of compensation payable: -0-

Unpaid medical expenses:

weeks of temporary total disability (or temporary partial disability)

weeks of permanent partial disability from Employer

weeks of disfigurement from Employer

22. Second Injury Fund liability: N/A

Total: -0-

23. Future requirements awarded: N/A

Said payments to begin N/A and to be payable and be subject to modification and review as provided by law.

The compensation awarded to the claimant shall be subject to a lien in the amount of N/A of all payments hereunder in favor of the following attorney for necessary legal services rendered to the claimant:

FINDINGS OF FACT and RULINGS OF LAW:

Employee: Joe Ainsworth Injury No. 05-023443

Before the
DIVISION OF WORKERS' COMPENSATION
Department of Labor and Industrial Relations of Missouri
Jefferson City, Missouri

Dependents: Linda Ainsworth

Employer: Branson R-IV School District

Additional Party: N/A

Insurer: Missouri Employers Mutual Insurance Company

Hearing Date: March 31, 2008 Checked by:

AWARD ON HEARING

The above-referenced workers' compensation claim was heard before the undersigned Administrative Law Judge on March 31, 2008. The record was left open for the submission of additional evidence, and the parties were afforded an opportunity to submit briefs or proposed awards, resulting in the record being completed and submitted to the undersigned on or about May 27, 2008.

The employee appeared personally and through his attorneys, Patrick J. Platter, Esq. and Christiaan D. Horton, Esq. The employer and insurer appeared through their attorney, Brandon Potter, Esq. The Health Care Provider, Freeman Neosho Hospital, is an additional party, relative to the filing of a Medical Fee Dispute (Direct Pay), but did not appear for the hearing.

The parties entered into a stipulation of facts. The stipulation is as follows:

(1) On or about March 24, 2005 Branson R-IV School District was an employer operating under and subject to

The Missouri Workers' Compensation Law, and during this time was fully insured by Missouri Employers Mutual Insurance Company.

(2) On the alleged injury date of March 24, 2005, Joe Ainsworth was an employee of the employer, and was working under and subject to The Missouri Workers' Compensation Law.

(3) The above-referenced employment and contract of employment was made in Taney County, Missouri. The alleged accident occurred in Newton County, Missouri. The parties agree to venue lying in Christian County, Missouri. Venue is proper.

(4) The employer received timely and actual notice of the claimed accident and injury, as required by Section, 287.420, RSMo.

(5) The Claim for Compensation was filed within the time prescribed by Section 287.430, RSMo.

(6) At the time of the alleged accident the employee's average weekly wage was sufficient to allow a compensation rate of $273.40 for death benefit compensation.

- Temporary disability benefits are not applicable insofar as the employee suffered immediate death.

- The employer and insurer did not provide any medical treatment to the employee, and have not provided any death benefit compensation or burial expenses to the claimant.

- On or about March 24, 2005, and at all times relevant to this case, Linda Ainsworth was the spouse of the deceased employee, and the sole and total dependent of the deceased employee under Chapter 287, RSMo.

The sole issues to be resolved by hearing include:

(1) Whether the employee sustained an accident on or about March 24, 2005; and, if so, whether the accident arose out of and in the course of employment?

- Whether the alleged accident of March 24, 2005 caused the injuries and disabilities for which benefits are now being claimed?

- Whether the employer and insurer are obligated to pay for certain past medical care and expenses in the amount of $2,021.73?

- Whether the employer and insurer are liable for payment of burial expenses in the amount of $5,000.00?

- Whether the claimant, Linda Ainsworth, is entitled to death benefit compensation, and such other death benefits, as may be allowed under Chapter 287, RSMo?

EVIDENCE PRESENTED

The claimant testified at the hearing in support of her claim. Also, the claimant presented at the hearing of this case the testimony of two other witnesses –Mark McSpadden and Keith N. Norton, M.D. Inaddition, the claimant identified the following exhibits:

Exhibit A ..... Claim for Compensation
Exhibit B ..... Answer to Claim for Compensation
Exhibit C ..... .Certificate of Death
Exhibit D ..... Branson R-IV School District Payroll Information
Exhibit E ..... Newton County Ambulance Records
Exhibit F ..... Neosho Police Department Report
Exhibit G ..... Freeman Neosho Hospital Records
Exhibit H ..... Autopsy Photographs (three photos)
Exhibit I ..... Medical Report of Keith N. Norton, M.D.
Exhibit J ..... Newton County Coroner Short Form Report
Exhibit K ..... Deposition of Keith N. Norton, M.D.
Exhibit L ..... CV of Keith N. Norton, M.D.
Exhibit M ..... Deposition of Brandon Heupel (September 25, 2007)
Exhibit N ..... Deposition of Mark Bridges (April 11, 2007)
Exhibit O ..... Deposition of Barry Waack, M.D. (October 16, 2007)
Exhibit P ..... Bus Photograph (Black & White)
Exhibit Q ..... Bus Photograph (Color No. 1)
Exhibit R ..... Bus Photograph (Color No. 2)
Exhibit S ..... Bus Photograph (Color No. 3)
Exhibit T ..... Bus Photograph (Color No. 4)
Exhibit U ..... Bus Photograph (Color No. 5)
Exhibit V ..... Bus Photograph (Color No. 6)
Exhibit W ..... Bus Photograph (Color No. 7)

The Claimant offered for admission into evidence the aforementioned exhibits, with the exception of Exhibit D. After taking into consideration certain objections of the employer and insurer, the undersigned received all the exhibits, and admitted into evidence all of the aforementioned exhibits, except Exhibit D. (Further, the undersigned did not admit into evidence the statements of person identified in the police report (Exhibit F), in accordance with the parties' stipulation that such statements constitute inadmissible hearsay. Similarly, in all depositions received and admitted into evidence, the statements of person identified in the police report (Exhibit F) and made part of the depositions were not admitted into evidence. .

The employer and insurer presented one witness at the hearing of this case – George R. Nichols, II, M.D. In addition, the employer and insurer identified the following exhibits:

Exhibit 1 ..... Photograph 7A
Exhibit 2 ..... Photograph 7B
Exhibit 3 ..... Photograph 7C
Exhibit 4 ..... Photograph 7D
Exhibit 5 ..... Photograph 7E
Exhibit 6 ..... Photograph 7F
Exhibit 7 ..... Photograph 7G
Exhibit 8 ..... Photograph 7H
Exhibit 9 ..... Photograph 7I
Exhibit 10 ..... Photograph 7J

Exhibit 11 ..... Photograph 7K
Exhibit 12 ..... Photograph 7L
Exhibit 13 ..... Photograph 7M
Exhibit 14 (Volume I) ... Deposition of Norbert T. Belz, M.D. (March 21, 2008)
Exhibit 14 (Volume II) ..... Deposition of Norbert T. Belz, M.D. (April 25, 2008)
Exhibit 15 ..... Deposition of Brandon Heupel (September 25, 2007)
Exhibit 16 ..... Deposition of Barry Waack, M.D. (October 16, 2007)
Exhibit 17 ..... Deposition of Mark Bridges (April 11, 2007)
Exhibit 18 ..... Letter to Attorney Brandon Potter (January 23, 2008)
Exhibit 19 ..... Letter to Attorney Brandon Potter (November 28, 2007)
Exhibit 20 ..... CV of George R. Nichols, II, M.D.
Exhibit 21 ..... Heart Diagram Disease / Normal
Exhibit 22A ..... Heart Diagram Disease / Normal (Smaller Version)
Exhibit 22 ..... Diagram Hypertrophic Cardiomyopathy
Exhibit 23 ..... Heart Diagram
Exhibit 24 ..... Enlarged Heart
Exhibit 25 ..... Hemodynamic Stress Chart

The employer and insurer offered for admission into evidence Exhibits 1 through 25, with the exception of Exhibits 8 and 11. The undersigned received all of these exhibits, and admitted into evidence all of said exhibits, except Exhibits 8 and 11. (The undersigned received and admitted into evidence Exhibit 14, Volume II, subsequent to the hearing.)

In addition, the parties identified several documents filed with the Division of Workers' Compensation, which were made part of a single exhibit identified as the Legal File. The undersigned took official notice of the documents contained in the Legal File, which include:

- Notice of Hearing
- Request for Hearing-Final Award
- Answer of Employer/Insurer to Claim for Compensation
- Claim for Compensation
- Report of Injury
- Medical Fee Dispute Application (Notice of Services Provided & Request for Direct Payment)

All exhibits appear as the exhibits were received and admitted into evidence at the evidentiary hearing. There has been no alteration (including highlighting or underscoring) of any exhibit by the undersigned judge, with the exception of denoting Exhibit 14 as Volume I, and noting the second deposition of Dr. Belz as Exhibit 14, Volume II.

DISCUSSION

Introductory Comment

The adjudication of this case is difficult, and not without doubt. The complexity of the issues, which involve both medical and legal concerns, relate to a singular concern – Did the employee (Joe Ainsworth) die from a sudden cardiac death while in the driver's seat of the school bus, or did Mr. Ainsworth die from asphyxiation (associated with the position in which he became situated at the accident scene). Multiple physicians, including two pathologists, provide conflicting medical opinions, supported by objective reasons, relative to the underlying question. Yet, in rendering their opinions, the physicians concede certain points or arguments of opposing counsel, and recognize the possibility of a differing opinion.

Personal background of Joe Ainsworth

Joe Ainsworth was a 56- year-old Caucasian male employed as a bus driver for the Branson R-IV School District. He married his wife Linda in 1970 and the two were married almost 35 years. His wife Linda also works for the school district as a bus driver. The Ainsworths drove a double route (meaning morning and afternoon routes) for the School District. Joe Ainsworth, according to his wife's testimony, had passed mandatory school bus physicals and was eligible to drive as a school bus driver.

Further, Mr. Ainsworth did not suffer pre-existing high blood pressure or take medication for either high blood pressure or arteriosclerotic heart disease. However, Mr. Ainsworth suffered a prior heart attack, and further suffered from an enlarged heart. Mr. Ainsworth was a large male, with an estimated weight of 450 pounds or more.

The bus trip to Neosho

Mark McSpadden and Joe Ainsworth traveled by bus from Branson to Neosho on March 25, 2005 with a group of students. Mark McSpadden is a teacher and extra curricular instructor for the Branson School District. He teaches vocational agricultural education. He has also been the sponsor for the local FFA Chapter, for 24 years. He does not have medical training. He has been a long time friend and acquaintance of Joe Ainsworth.

On March 24, 2005, which was a cold rainy day, Joe Ainsworth and Mark McSpadden were scheduled to travel to Crowder College located in Neosho Missouri. The purpose of the trip was to transport 15-20 students to an FFA competitive event. The group left from Branson High School at 5:30 to 6:00 a.m. The bus was scheduled to arrive in Neosho at 8:00 a.m. The bus stopped briefly at the McDonalds Restaurant in Monett and then proceeded to Neosho. Mr. McSpadden registered the Branson students upon arrival and made sure that each student arrived at the appropriate venue. He then returned to Mr. Ainsworth and the bus. The two men had a couple of hours before they were required to meet the students, so they decided to take Mr. McSpadden to get some hot chocolate.

The two men went to a convenience store where Mr. McSpadden purchased a hot chocolate. They then proceeded to return to Crowder College. Mr. Ainsworth was driving the school bus and Mr. McSpadden was in the front right seat of the bus. Mr. Ainsworth traveled on Highway 71 and then drove east to proceed to Crowder College on Highway D (Lyons Drive).

The accident

While traveling back to Crowder College, Mr. Ainsworth and Mr. McSpadden were engaged in regular and ordinary conversation. While Mr. Ainsworth was driving along Highway D, Mr. McSpadden noticed that the bus started to veer to the left. At first, he was not alarmed because he knew Mr. Ainsworth had to make a left turn up ahead; however, the bus began to pick up speed and started to approach the median. He called for Mr. Ainsworth twice and Mr. Ainsworth was non-responsive. (According to Mr. McSpadden, there were no warning signs that Mr. Ainsworth was having trouble. The conversation was normal.)

Immediately subsequent to calling-out twice and receiving no response, Mr. McSpadden took action, trying to grab the steering wheel. (Mr. McSpadden is a big man, measuring approximately 6'6" in height, and weighing approximately 300 pounds.) However, at that moment, the bus hit the median and Mr. McSpadden lost his grip on the steering wheel. (Mr. McSpadden noted that he did not have time to take Mr. Ainsworth's foot off the accelerator or change gear.) The bus then jumped over the median and into the opposing lanes of traffic, still traveling at a high rate of speed. At that point, Mr. McSpadden got up and saw two semi trucks headed for the bus, so he grabbed the wheel and steered the bus left onto the shoulder of the road and then into the ditch to avoid a head-on collision with oncoming traffic. Mr. Ainsworth was still in the driver's seat.

The bus, according to Mr. McSpadden, took a “pretty violent hit” when it entered the ditch on the far side, then causing the bus to roll side to side. (The police report indicates that the bus traveled 1,207 feet from the time it initially left the roadway.) The forceful nature of hitting the ditch caused Mr. McSpadden to hit his head on the ceiling of the bus and fall on the floor. Mr. Ainsworth was tossed into the air and over Mr. McSpadden. Also, the impact caused Mr. Ainsworth to land head-first between the handrail of the bus and the front wheel well located by the front door. Mr. Ainsworth’s body was over Mr. McSpadden’s legs. Mr. McSpadden freed himself and got behind the wheel of the bus; he then slowed it down, allowing it to come to a final rest after hitting a culvert in the ditch. Although dazed by the incident, Mr. McSpadden turned off the bus, and then went back to and sat in a seat behind the driver’s set where the first witnesses at the scene found him.

Mr. McSpadden acknowledged being stunned from hitting his head several times while the bus was out of control during the accident. Additionally, Mr. McSpadden noted that he did not see Mr. Ainsworth hit head on the windshield. Nor did Mr. McSpadden recall seeing Mr. Ainsworth make any sounds or gasp for breath. In this regard, Mr. McSpadden indicated that he was unable to tell whether Mr. Ainsworth was breathing; but Mr. Ainsworth was wedged in the bus tight, the color of his face was blue, and there was a concern he could not breathe. In describing the specifics of Mr. Ainsworth’s placement, Mr. McSpadden noted that Mr. Ainsworth came to rest in front of the front seat with his body wedged against the front seat pad and the handrail that lead down the stairway to the opening and closing of the bus.

Events at the scene after the accident

Shortly after the bus came to a stop, a bystander opened the front door of the bus. At that point, the two men directed their attention to Mr. Ainsworth, who was lying on his side, facing the stairwell, with his right shoulder propped up on a raised area (the wheel well) with his upper front torso pressed up against a metal bar that extended from the handrail at an angle to the floor. Mr. McSpadden attempted to pull Mr. Ainsworth by the pants and belt, and the bystander attempted to push on Mr. Ainsworth’s chest to keep his upper torso, including his neck, away from the bar in order to relieve pressure on Ainsworth’s upper chest and neck region. In light of Mr. Ainsworth size, the two men could not free Mr. Ainsworth, and were forced to maintain their limited assistance until the paramedics arrived. The ambulance crew then arrived several minutes later.

Mr. McSpadden testified that he collapsed into a seat when the paramedics arrived, and then he too received medical attention and was taken to a hospital. At the hearing, Mr. McSpadden noted that, while he was present on the scene, Mr. Ainsworth did not regain consciousness; Mr. Ainsworth did not breathe or make any noise or sound; and he did not see any vomitus around Mr. Ainsworth mouth or anywhere on the bus.

The Extraction by EMTs and Transport to Freeman Neosho Hospital

The Newton County Ambulance District received a call at 10:53 a.m. on March 2, 2005 with a report of the accident and need for an emergency response. The ambulance crew was dispatched at 10:54 and was en route at 10:55 a.m. The ambulance arrived at the scene at 11:01 a.m. (eight minutes after call was received). The crew found Mr. Ainsworth with his head caught between the side of the bus and the grab rail by the door. Mr. McSpadden informed the crew of the circumstances of the accident.

The attending paramedic (EMT), Brandon Heupal, made a quick assessment of Mr. Ainsworth. He observed that Mr. Ainsworth was not breathing; Mr. Ainsworth had no pulse, and Mr. Ainsworth’s pupils were dilated. Additionally, Mr. Heupal noted that Mr. Ainsworth’s airway was closed, and Mr. Ainsworth’s head was caught between the side of the bus and the handrail. In light of Mr. Ainsworth’s size, and the positioning of his body, the crew found it very difficult to move Mr. Ainsworth. Notably, it took the paramedic crew approximately ten

(10) minutes to extricate Mr. Ainsworth from the bus. Based on the time of the initial call (10:53), the arrival time for the EMTs (11:01), and the time to extract Mr. Ainsworth (10 minutes), Mr. Ainsworth was situated in the wedged position for a total of eighteen (18) minutes.

After extrication, the ambulance crew moved Mr. Ainsworth out of the bus onto a stretcher and secured him onto a backboard. Cardiac monitoring indicated v-fibrillation to Asystole. The crew attempted defibrillation but Mr. Ainsworth was unresponsive and determined to be Asystole. The paramedics initiated CPR with pacing, but without success. The crew then moved Mr. Ainsworth into the ambulance and dispatched him to the hospital.

Notably, in transporting Mr. Ainsworth to the hospital, the paramedics noted that Mr. Ainsworth's pupils were dilated, and he was "very cyanotic and unresponsive. Additionally, the paramedics noted that Mr. Ainsworth did not present with any obvious injury to the back or extremities, and the reason for treatment was "cardiac arrest."

In route, the paramedics intubated Mr. Ainsworth, which the paramedics identified or confirmed placement of the intubation tube by a good visualization and lung sounds. The crew removed Mr. Ainsworth's coat and shirt and attempted an IV with no success. The intubation tube filled with vomit and had to be suctioned. The crew attempted CPR at all times, but could not administer medications to Mr. Ainsworth through the intubation tube because it kept filling with vomit. The crew suctioned and bagged Mr. Ainsworth with 100% oxygen. Upon arrival at Freeman Neosho Hospital, that attending medical staff transported Mr. Ainsworth to the Emergency Room, and then transferred Mr. Ainsworth to a hospital bed. Hospital staff then took over the care for Mr. Ainsworth. The medical records refer to the event as follows:

Received call needing Amb for 1050. Enroute code-3 from FNH. UOA pt found with his head caught between the side of the bus and the grab rail by the door. Another person on the bus stated that pt was CAO and was talking with pt when he passed out and fell into floor. Bus then ran off the road and struck a culvert, HOA to pt. Pt was cyanotic not breathing and has no pulse. Pt's head was caught between the side of the bus and the handrail. Pt's body weight was pushing pt's neck onto bar causing patient not to be able to breathe. Due to patient's size and being stuck, he was very difficult to move. Extricating time was approx. 11 min. After getting pt's head extricated, pt was moved out of bus onto LEB and secured. Cardiac mon applied showing v-fib. Pt. was de-fibbed x I and went into asystole. CPR started. Pacing attempted and no success. Pt was moved into Ambulance enroute to hospital. Pt intubated with 8.0 ET tube. J confirmed placement by good visualization and lung sounds. Pt's coat and removed, IV attempted x 2 in L AC no success. Tube filled with and had to be suctioned. CPR in progress at all times. Attempted to give meds down the tube, but unable due to tube being filled with vomit. CPR continues Pt was suctioned and bagged with 100% O2. Pt was transported pri 1 to FNH, moved to ER bed and all care turned over to ER staff with no further problems.

Medical records of Freeman Neosho Hospital indicate that Mr. Ainsworth was admitted to the hospital at approximately 11:20 a.m.-- approximately 30 minutes after the accident. The heart monitor showed his heart in asystole. CPR continued once Mr. Ainsworth arrived in the ER. When the attending physician, Dr. Barry Waack, first observed Mr. Ainsworth, he noted that the intubation tube was not in the appropriate place. The tube was removed and vomitus was noted to be coming out of Mr. Ainsworth's mouth. Dr. Waack could not state any opinion on when or how the intubation tube became dislodged; it is possible that it became dislodged when Mr. Ainsworth was transferred from the gurney to the hospital bed at the ER. Similarly, it is possible that Mr. Heupel improperly intubated the tube in the esophagus, and not the trachea (windpipe). Notwithstanding, the CPR continued and Mr. Ainsworth required frequent suctioning to remove vomit from his mouth and airway. Dr. Waack tried to intubate Mr. Ainsworth but was unsuccessful. Mr. Ainsworth was then "bagged" with an oral airway in place and remained in asystole during the entire course of CPR.

Further, the medial records of Freeman Neosho Hospital reveal that the EMTs informed the hospital staff of Mr. Ainsworth's history from the accident scene. In noting the chief complaint, Trina Busick, R.N., who was the triage nurse, propounded the following comment:

CODE BLUE – driver of school bus who collapsed suddenly – bus into small ditch – EMS found pt slumped over a metal bar – almost in a "hanging position" – extensive extrication @ scene – EMS report pt was cyanotic from neck up.

The attending physicians and staff continued CPR for approximately 15 minutes, but with no success.

At 11:35 a.m., Dr. Barry Waack pronounced Mr. Ainsworth dead. The records do not indicate that Mr. Ainsworth ever regained consciousness, or breathed on his own. Mr. Ainsworth's corneas were donated to the Heartland Lions Eye Bank. Additionally, the Newton County Coroner, Mark Bridges, after discussions with Linda Ainsworth, ordered an autopsy to determine whether Mr. Ainsworth's death was accidental or the result of natural causes. Thereafter, for purpose of undergoing an autopsy, Mr. Ainsworth's body was transported to Cox Hospital.

The Autopsy

Dr. Keith Norton of Southwest Missouri Forensics conducted an autopsy on Joe Ainsworth the day following the accident (March 25, 2005). Notably, as part of the autopsy, Dr. Norton notes a reported history of the circumstances of death, as follows:

Reportedly, this 56-year-old Caucasian male was driving a school bus when he collapsed and another person brought the bus to a stop. There were minor accidents before the bus could be stopped and Mr. Ainsworth fell to the floor during that period. Reportedly, when he was taken out of the bus, his neck had been pressed against a bar by his weight. Reportedly, he had a heartbeat in the emergency room. Mr. Mark Bridges, the Coroner of Newton County, requested an autopsy to determine whether this was an accidental death or a natural death.

Dr. Norton completed an external and internal examination of Mr. Ainsworth. The following is noteworthy from the autopsy report:

The Heart

- The heart weighs 600 grams and is remarkable for enlargement
- The myocardium is firm and red/brown except for an area of white discoloration of the left ventricular wall measuring approximately 1 cm in greatest dimension
- The coronary arteries arise and branch in the usual fashion with moderate atherosclerosis involving the right coronary artery and the left anterior descending coronary artery
- Only mild atherosclerosis involves the left circumflex coronary artery
- The aorta arises and branches in the usual fashion with no atherosclerosis, but there is diffuse atherosclerosis involving the vessels at the base of the brain

Respiratory

- There is no evidence of pulmonary emboli

Nervous System

- There is mild to moderate cerebral edema, but no other abnormality is noted on sectioning the cerebral hemispheres, the cerebellum or the brain stem
- The vessels at the base of the brain show diffuse atherosclerosis

Miscellaneous

- The neck organs are remarkable for a contusion of the soft tissue posterior to the thyroid cartilage

Histopathology

- Although portions of each of the major organs were retained in formalin at the time of the autopsy, no sections were submitted for histologic examination. If histologic examination is required, it can be produced as long as the request is received within one year of the date of the autopsy.

Toxicology

- Specimens of blood, brain, urine and liver were submitted to the St. Louis University Toxicology Laboratory for analysis and the analysis revealed no abnormal agents

On May 10, 2005, Dr. Keith Norton wrote a cover-letter to Mark Bridges, the Coroner of Newton County, expressing his opinion that the cause of death of Joe Ainsworth appeared accidental. In expressing his opinion to Mr. Bridges, Dr. Norton propounded the following comments:

The cause of death of Joe D. Ainsworth, A05-041, was probably blunt trauma to the neck that occurred during the motor vehicle crash. This trauma to the neck (that resulted in a bruise behind the voice box) probably decreased blood flow to the brain and resulted in the aspiration of gastric contents. The motor vehicle crash may have been occasioned by Mr. Ainsworth losing consciousness due to an irregular beating of the heart. This could have been caused by the enlargement of the heart or by the decreased blood flow through the narrowed arteries to the heart.

The other significant conditions include coronary atherosclerosis, cardiomegaly, and morbid obesity. The toxicology showed no abnormal agents.

Certificate of Death

After receipt of the autopsy report of Dr. Norton and a review of the ambulance reports, Mark Bridges concluded the manner of death to be “accident” and the cause of death was “asphyxiation, aspiration and possible positional asphyxia.” The Certification of Death, dated April 21, 2005, identifies the underlying cause of death to be as follows:

Asphyxiation – Minutes
Aspiration – Minutes
Possible Positional Asphyxia – Minutes
SIG COND: Subgaleal Hematoma; Rib Fractures; Severe Coronary Artery Disease; Previous Myocardial Infarction

Medical Opinions

Dr. Keith Norton

Keith Norton, M.D., who is the chief pathologist at Southwest Missouri Forensics in Nixa, Missouri, and has occupied that position since July of 2003, performed the autopsy of Mr. Ainsworth. According to Dr. Norton, the probable cause of Mr. Ainsworth's death is asphyxiation, caused by decreased blood flow and oxygen to the brain due to the positioning he was in on the bus and his inability to breathe effectively (also referred to as positional asphyxiation), and the aspiration of gastric contents that blocked his airway. He thus deems Mr. Ainsworth's death to be accidental.

Notably, in support of his opinion, Dr. Norton identifies several objective factors or reasons. The criteria identified by Dr. Norton includes the following points:

- Although Mr. Ainsworth had suffered a prior heart attack, there was no evidence of a recent myocardial infarction or heart attack.

- There was no evidence of a pulmonary embolism in his lungs, nor any blood clots in Mr. Ainsworth's brain.

- The presence of bruising and "goose eggs" on Mr. Ainsworth's head evidenced blood flow, circulation and heart pumping activity during the early moments he was wedged with his upper chest and neck region pressed on the metal bar. (In other words, Mr. Ainsworth did not die of a sudden cardiac death as maintained by Dr. George Nichols. Rather, he died from asphyxia caused by his body positioning, the blockage of his airway and reduced blood flow to the brain.)

- Dr. Norton attributed the bruise found posterior to the thyroid cartilage to be a blunt trauma to the neck, and did not agree that this bruising could have been caused by improper intubation as opined by Dr. George Nichols due to the location of the bruise itself.

- Mr. Ainsworth could have aspirated gastric content, causing his airway to be occluded or blocked, while he was on the bus and prior to extraction. And, trauma to his head could have contributed to decreasing his loss of consciousness so he would be more likely to vomit.

- Dr. Norton did not believe that Mr. Ainsworth suffered immediate "V-fib" when he was behind the wheel of the bus because that theory was inconsistent with the bruising he observed. He also noted that after just a few minutes of decreased oxygen and blood flow to the brain, a heart (especially an enlarged heart) can go into ventricular fibrillation, so "V-fib" could have been triggered as Mr. Ainsworth lay wedged on the handrail unable to breathe.

- Dr. Norton did not consider the lack of visible evidence noted on the outside of Ainsworth's neck, bruising or otherwise, where the metal bar may have been positioned against Mr. Ainsworth neck, to be conclusive that he did not suffer from asphyxiation. Responding to Dr. Nichols' point, Dr. Norton notes that the thickness of the bar, size of Mr. Ainsworth's neck, the adipose (fatty) tissue present in his neck, and the likelihood that the pressure from the bar would have been dissipated across the neck region leaving no external bruising or marks.

On cross-examination, Dr. Norton acknowledged that Mr. Ainsworth weighed approximately 450 pounds (morbidly obese), was 56 years of age, had an enlarged heart of 600 grams, and had prior evidence of a heart attack (a spot of dead tissue was located on the heart indicating a heart attack more than 30 days prior to his death). Further, Dr. Norton acknowledged that, at the time of Mr. Ainsworth's death, he was at risk for suffering arrhythmia and sudden cardiac death. In this regard, Mr. Ainsworth's heart was two hundred grams larger than the normal heart and that it was 100 grams larger than the size in which cardiac pathologists generally say can be a cause of death in and of itself.

In addition, during the course of his cross-examination, Dr. Norton acknowledged that a history of Mr. Ainsworth driving a school bus, losing consciousness, and then slumping over the wheel, would be a typical presentation for a person suffering from arrhythmia – a condition that can strike anywhere and anytime for people at risk to have an arrhythmia. In describing the nature of arrhythmia and an enlarged heart condition, which would put a person at risk for suffering arrhythmia, Dr. Norton propounded the following explanation:

…the heart is so big, that you can get irregular beatings, arrhythmias of the heart. And what can happen is that the normal situation is that the impulse starts at the top of the heart, and then it goes down to the junction between the top part and the lower part of the heart, the atria and the ventricles. So it goes through the top part of the heart and the atria and down into the ventricles, and it progresses smoothly.

And if the impulse were to come down the front of the heart and it would go back and meet – reach the back of the heart, the impulse would reach muscle cells that had just fired and just contracted, and they say just did that, I have to wait. So it sort of controls the rate at which the heart can beat.

However, when the heart gets this big, the time duration for the transmission is increased. It takes longer for the message to get around. And when it gets around there, the heart – some of those heart muscles can say, oh, okay, if say so, you know, I've had a little bit of rest since the last time I contracted, and it starts to contract again. And it passes that message on the nearby muscle cells, and they contract also. So what started out as a normal organized beating, suddenly it's taking turns and it's very ineffective. That's what's called fibrillation, irregular beating of the heart.

Further, on cross-examination, Dr. Norton acknowledged that the condition of having an enlarged heart greater than 50 grams can in and of itself cause death. And, in particular, once it starts, "it kills." In this regard, Dr. Norton provided the following testimony:

Q. Okay, And then –
A. It's called a reentrant arrhythmia because it's going around and around.

Q. If I understand your statement correctly you stated previously, cardi --- cardiological pathologists have – it's your understanding that they believe that can cause death in and of itself?
A. Yes. Having a heart more than 500 grams can cause death.

Q. All right. And why – that's just because of this irregular heartbeat?
A. Correct.

Q. If the body dies from irregular heartbeat, can you just describe that process? I mean, do you have an understanding as to how that process actually takes place?
A. Certainly. When the irregular heartbeat starts, then the flow of blood is stopped because the heart cannot pump effectively. So once you have decreased blood flow and absent blood flow, then the brain doesn't get the oxygen and your're pronounced dead.

Q. All right. And this can happen in somebody with a heart of 500 grams or more, and it can happen ever so often, or it can happen infrequently; is that correct?
A. Usually once in each person. Depends on whether they're defibrillated effectively. If somebody defibrillates them with an automatic emergency defibrillator, an AED, or whether paramedics say "clear" and give them a jolt, then they can stop their fibrillation. Usually once it starts, it kills you.

Finally, on cross-examination, Dr. Norton acknowledged premising his opinion that Mr. Ainsworth died of Asphyxiation on his belief Mr. Ainsworth was alive at some point after losing consciousness because of the presence of a hematoma discovered during the autopsy. The presence of this hematoma, according to Dr. Norton, is an indication that Mr. Ainsworth had a beating heart, which produced the blood flow necessary to cause a hematoma. Yet, Dr. Norton acknowledged the viability of two additional alternative explanations for the hematoma. First, a hematoma could result from gravity when the head is in a downward position for a period of time, which would allow the blood to pool in previous injured blood vessels. Second, a hematoma could develop because of CPR, which would cause the heart to pump and push blood to areas where there were damaged blood vessels. And, in this case, Mr. Ainsworth received CPR.

George Nichols, M.D.

George Nichols, M.D., who is a physician licensed in the states of Kentucky and Ohio, and for the period of 1977 to 1997, served as the chief medical examiner for the state of Kentucky. Dr. Nichols holds specialty certification by the American Board of Pathology, with special competency in three fields of medicine: anatomic pathology, clinical pathology, and forensic pathology. Dr. Nichols testified in person at the hearing.

In preparation for his testimony, Dr. Nichols reviewed all depositions of all the witnesses that were admitted into evidence, all photographs that were admitted, the police report, the recorded statement of Mark McSpadden, autopsy photographs, the autopsy report and deposition of Dr. Norton, as well as the medical records pertaining to Mr. Ainsworth for the day of the accident. In light of his examination and evaluation of the evidence, Dr. Nichols opined that Mr. Ainsworth died from arrhythmia, specifically from an arrhythmia that resulted in ventricular fibrillation. Similarly, Dr. Nichols opined that Mr. Ainsworth's death was not caused by any of his movements during the bus accident or the location of his body; and, Mr. Ainsworth was dead before he left the driver's seat.

Notably, in support of his opinion, Dr. Nichols identifies several objective factors or reasons. The criteria identified by Dr. Nichols includes the following points:

- Mr. Ainsworth had all the classic risk factors for having an arrhythmia, including his weight, age, massive size of heart (600 grams) and arthrosclerotic heart disease.

- In his years of experience as a pathologist, he had never made a finding during an autopsy or reviewed any case in which there was a cause of death from asphyxia, in which there was bruising on the anterior portion of the esophagus but no bruising on the trachea or any of the muscle tissue in front of the trachea. (Dr. Nichols attributes the bruising inside of Mr. Ainsworth's neck to improper endotracheal intubation; and the presence of vomitus was caused by this improper intubation. Additionally, Dr. Nichols notes that, the inability of the ambulance personnel to give medicine to Mr. Ainsworth through the endotrachial tube because of the vomitus, and the finding of Dr. Waack in the emergency room that the endotrachial tube was not in the right place, are evidence of improper intubation.)

- Dr. Nichols disagreed with Dr. Norton in interpreting the presence of a hematoma as evidence of Mr. Ainsworth

not suffering sudden death by arrhythmia. Dr. Nichols notes that one of two possible explanations may explain the hematoma. Gravity could have caused it, when the head was in a downward position for a period of time, which would allow the blood to pool in previous injured blood vessels. Alternatively, CPR, which would cause the heart to pump and push blood to areas where there were damaged blood vessels, could have caused it.

- Dr. Nichols notes that the testimony of Mr. Ainsworth turning blue is a sign of Mr. Aisworth's death, but not because of asphyxiation. According to Dr. Nichols, once a person is without oxygen traveling to the brain, a person will start to turn blue immediately and turning blue in the face and neck area only substantiates there was no oxygen getting to the brain. In this context, Dr. Nichols notes that a person suffering from arrhythmia will experience the lack of oxygen traveling to the brain because of the absence of the heart pumping the blood.

- In rejecting the theory of asphyxiation, Dr. Nichols notes that there should have been a physical finding of petichia (small hemorrhages on the body), with a diagnosis of asphyxia. In particular, according to Dr. Nichols, in cases of asphyxiation, strangulation or positional asphyxia, pathologists typically find hemorraghes in the retinas of the eyes. Yet, in Mr. Ainsworth's case, none of the physicians found any evidence of petichia.

On cross-examination, Dr. Nichols agreed with the diagnoses supplied by Dr. Keith Norton, as follows:

- aspiration of gastric contents
- blunt trauma to the neck (with retro-laryngeal contusion)
- coronary atherosclerosis
- morbid obesity
- subgaleal hematomas
- facial abrasions and contusions
- cholelithiasis
- cerebrovascular atherosclerosis

Further, on cross-examination, Dr. Nichols acknowledged that his opinion that Mr. Ainsworth died of arrhythmia, and his rejection of Dr Norton's opinion that Mr. Ainsworth died of asphyxiation, is premised in part on the autopsy disclosing no external injury to the skin of the neck of Ainsworth, and the autopsy and medical records disclosing no facial petechial hemorrhages. Dr. Nichols thus acknowledges that, without corresponding soft tissue injury to any structure of the neck anterior to the bruising found posterior to the thyroid cartilage, he opines that the metal bar was not a cause of an obstruction to Ainsworth's airway or blood flow to the brain. Yet, on cross-examination, Dr. Nichols agreed that Mr. Ainsworth's airway would not have to be blocked 100 percent for it to cause reduced oxygen and blood flow to the brain and heart. He also agreed that decreased oxygen can trigger the heart to go into ventricular fibrillation within minutes.

In addition, on cross-examination, Dr. Nichols acknowledged reviewing microscopic slides of Mr. Ainsworth's heart, lung and brain tissues, obtained during the post-mortem autopsy of Mr. Ainsworth, revealed no abnormalities in the lung or brain tissue samples he viewed. Similarly, there was no evidence of any pulmonary embolism or blood clot in the lungs or brain. He also viewed the heart tissues and testified that there was no evidence of a myocardial infarction (burst vessel) that caused Mr. Ainsworth's death, although Mr. Ainsworth's coronary arteries exhibited atherosclerosis, or narrowing. According to Dr. Nichols, the slides did not reveal the cause of Mr. Ainsworth's death.

Finally, Dr. Nichols acknowledged that he did not place much weight on the EMT report or the Freeman

Neosho Hospital Records that contained information about the metal bar being situated across Mr. Ainsworth's neck, and the reference to Mr. Ainsworth being situated in a "hanging" position. According to Dr. Nichols, these factors are mitigated by the absence of any physical evidence of a bar mark or tissue damage to the front of the neck.

Norbert Belz, M.D.

Norbert Belz, M.D., who is a physician practicing in the specialty of preventive medicine with a subspecialty of environmental medicine, and who deals with cases involving issues of causation and disease, including cases of occupational disease or cases of a single event resulting in injury or death, testified by deposition on behalf of the employer and insurer. In preparation for his testimony, Dr. Belz reviewed photographs, medical records and depositions of the witnesses that were admitted into evidence. Also, Dr. Belz interviewed Mr. McSpadden and visited the bus involved in the accident. Dr. Belz maintained in his file photographs of the bus and a detailed summary of the measurements of the bus. In light of his examination and evaluation of the evidence, Dr. Belz opined that Mr. Ainsworth suffered a sudden cardiac death, which is a natural cause and not an accident.

Dr. Belz identified sudden cardiac death to be an expression of underlying heart disease, where the presenting symptom is death, and the usual mechanism of that death is a fatal arrhythmia (where the heart beats in a very abnormal manner). According to Dr. Belz, the most common type of fatal arrhythmia is ventricular fibrillation, which means the heart stops pumping suddenly, catastrophically, resulting in death. When Ventricular fibrillation occurs, the heart alone cannot stop it. The outward presentations displayed by a person suffering from ventricular fibrillation is that they "keel over" – The person experiences sudden and catastrophic collapse, loss of consciousness and death.

In support of his opinion, Dr. Belz identifies several objective factors or reasons, which include the following points:

- At the time of Mr. Ainsworth's death, he presented with a medical condition characteristically susceptible to suffering arrhythmia and ventricular fibrillation, resulting in sudden cardiac death. Notably, he had an enlarged heart, weighing 600 grams, which was compromised by hardened arteries. (Dr. Belz explained that, when an arrhythmia and ventricular fibrillation occur, the muscles of the heart cannot deliver enough blood, causing the heart muscle to misfire due to a lack of oxygen. When the heart muscles misfire, instead of following a smooth electrical pulse around the heart, a chaotic rhythm develops; the heart does not contract one time but instead wiggles. When ventricular fibrillation occurs, the person blacks out and dies.)

- According to Dr. Belz, the history of the event, wherein Mr. Ainsworth and Mr. McSpadden were engaged in conversation but the conversation by Mr. Ainsworth stopped without explanation, followed by Mr. Ainsworth losing consciousness and being unresponsive, is indicative of him suffering sudden cardiac death. Additionally, Dr. Belz states that the driving of the bus and the eventual slumping over the steering wheel did not cause, aggravate, accelerate, or precipitate the arrhythmia, ventricular fibrillation and sudden cardiac death.

- Upon hooking Mr. Ainsworth up to the EKG, the paramedics found Mr. Ainsworth to be suffering ventricular fibrillation.

- Dr. Belz considered it not to be biologically plausible for the bruising observed by Dr. Norton to be caused by the placement of the bar against Mr. Ainsworth neck, and not cause bruising in the front of the neck. Dr. Belz states simply that it is not plausible for the bar to be against the Adam's apple, crush the air tube, crush the food tube and then bruise the back of the food tube without disrupting the skin where the one inch bare was located

(and, not cause any damage to any of the other areas in front of the bruise in the esophagus).

- Similar to Dr. Nichols, in rejecting the theory of asphyxiation, Dr. Belz concurs with Dr. Nichols that there should have been a physical finding of petichia (small hemorrhages on the body), if Mr. Ainsworth had suffered from asphyxia. Yet, in Mr. Ainsworth's case, none of the physicians found any evidence of petichia.

On cross-examination, Dr. Belz acknowledged that there could be an absence of petechiae in patients with asphyxial deaths. He was of the opinion that the article marked as Exhibit 9 to his deposition (*Asphyxial Deaths and Petechiae: A Review* authored by Susan F. Ely, M..D., M.P.H. and Charles S. Hirsch, M.D.) was authoritative on its subject matter of asphyxial deaths and petechiae. This article provides:

- Petechiae of the head are the product of purely mechanical vascular phenomena; namely, impaired or obstructed venous return in the presence of continued arterial input.

- The likelihood of this occurrence is directly proportional to the degree of venous obstruction and inversely proportional to that of arterial compression at or above the level of the heart.

- Nearly 4.5 lbs of pressure is required to compress the jugular veins, whereas 11 and 66 lbs of pressure are required to compress the carotid and vertebral arteries, respectfully

- If the compressive pressure to the chest or neck is great enough to obstruct venous return from the head, but not enough to obstruct arterial flow to it, cephalic venous pressure will rise, as will the probability of small vessel rupture.

- Asphyxial deaths either with no impairment of venous return from the head or with arterial obstruction at or above the level of the heart characteristically lack facial and conjunctival petechiae.

- The importance of defining the pathogenesis of conjunctival and facial petechiae lies in the potential implications of their misinterpretation. They are simply markers of increased cephalic venous pressure. In and of themselves, they should not be regarded as supportive evidence of asphyxia; in a vacuum, conjunctival and facial petechiae point to no particular cause of death

Notwithstanding, Dr. Belz continued to opine that the totality of circumstances, including – no external marks on the skin overlying the Adam's apple and the absence of petechia, indicate that Mr. Ainsworth did not die from asphyxia but sudden cardiac death (arrhythmia and ventricular fibrillation). In addressing the absence of petechia, while acknowledging that be an absence of petechiae in patients with asphyxial deaths, Dr. Belz noted that the mechanism of death proposed by Dr. Norton requires significant compression to Mr. Ainsworth's carotid arteries, and this degree of compression would cause petechiae to be present. Further, Dr. Belz contends that the authors are supportive of his opinion. In this regard, Dr. Belz provided the

following testimony:

- … this article is consistent with what I was saying before, that according to the mechanism ascribed by Dr. Norton, there should be petechiae there. There aren't.

- And Norton said there was a decreased blood flow; correct?
- Well, he said there was decreased blood flow, that's correct. But as the article also says, that you will get the reduced venous flow at 4.5 pounds, you'll get the reduced carotid flow at 11, and in this case, there would be no way to reduce the vertebral artery flow. Now, mind you, the vertebral arteries in this case would still be pumping because the vertebral arteries are surrounded in the bone of the back of the neck.

So this – according to this article and according to the mechanism proposed by Dr. Norton, there should be petechiae all over this guy. Because what Norton says is that, "Hey. This bar came into his Adam's apple, crushed his windpipe, and then also occluded the blood flow to the carotid arteries," which are on either side of the windpipe, and that is what he proposed as his mechanism. And with that mechanism, then the two vertebral arteries are still wide open and patent.

In the meantime, when you've done that, you've also closed off your venous egress, which is the jugular veins. They've been closed by on 4.5 pounds of pressure, where it takes 11 pounds to close the carotids. Meanwhile, the vertebral arteries are still pumping a full pressure head of blood into the brain through the ventral arteries posterior because they're on the backside of the spinal column, and they are not involved in this compression. So they're continuing to pump pressure into the head, and petechiae should be present according to this article and according to the mechanism proposed by Dr. Norton. And this is – this article is one more reason why Dr. Norton's explanation is not biologically plausible.

FINDINGS AND CONCLUSIONS

The Workers' Compensation Law for the State of Missouri underwent substantial change on or about August 28, 2005. However, in light of the underlying workers' compensation case involving an accident date of March 24, 2005, the legislative changes occurring in August 2005 enjoy only limited application to this case. The legislation in effect on March 24, 2005, which is substantive in nature, and not procedural, governs substantively the adjudication of this case. Accordingly, in this context, several familiar principles bear reprise.

The fundamental purpose of The Workers' Compensation Law for the State of Missouri is to place upon industry the losses sustained by employees resulting from injuries arising out of and in the course of employment. The law is to be broadly and liberally interpreted and is intended to extend its benefits to the largest possible class. Any question as to the right of an employee to compensation must be resolved in favor of the injured employee. *Cherry v. Powdered Coatings*, 897 S.W. 2d 664 (Mo. App., E.D. 1995); *Wolfgeher v. Wagner Cartage Services, Inc.*, 646 S.W.2d 781, 783 (Mo. Banc 1983). Yet, a liberal construction cannot be applied in order to excuse an element lacking in the claim. *Johnson v. City of Kirksville*, 855 S.W.2d 396 (Mo. App., W.D. 1993).

The party claiming benefits under The Workers' Compensation Law for the State of Missouri bears the burden of proving all material elements of his or her claim. *Duncan v. Springfield R-12 School District*, 897 S.W.2d 108, 114 (Mo. App. S.D. 1995), *citing Meilves v. Morris*, 442 S.W.2d 335, 339 (Mo. 1968); *Bruflat v. Mister Guy, Inc.* 933 S.W.2d 829, 835 (Mo. App. W.D. 1996); and *Decker v. Square D Co.* 974 S.W.2d 667, 670 (Mo. App. W.D. 1998). Where several events, only one being compensable, contribute to the alleged disability, it is the claimant's burden to prove the nature and extent of disability attributable to the job-related injury.

Yet, the claimant need not establish the elements of the case on the basis of absolute certainty. It is sufficient if the claimant shows them to be a reasonable probability. "Probable", for the purpose of determining whether a worker's compensation claimant has shown the elements of a case by reasonable probability, means founded on reason and experience which inclines the mind to believe but leaves room for doubt. *See, Cook v. St. Mary's Hospital*, 939 S.W.2d 934 (Mo. App., W.D. 1997*); White v. Henderson Implement Co*., 879 S.W.2d 575,577 (Mo. App., W.D. 1994); and *Downing v. Williamette Industries, Inc*., 895 S.W.2d 650 (Mo. App., W.D. 1995). All doubts must be resolved in favor of the employee and in favor of coverage. *Johnson v. City of Kirksville*, 855 S.W.2d 396, 398 (Mo. App. W.D. 1993).

I.
Accident / Medical Causation

The parties do not readily dispute, that, on March 24, 2005, while traveling back to Crowder College, and while engaged in his employment with the Branson R-IV School District, Mr. Ainsworth suffered a motor vehicle accident. Similarly, the parties do not dispute that, at the time of this incident, Mr. Ainsworth and Mr. McSpadden were engaged in normal conversation; but, without any warning, the conversation stopped, the bus began to pick up speed and started to approach the median, and Mr. Ainsworth was non-responsive to yells by Mr. McSpadden.

Further, the parties do not readily dispute the events of the motor vehicle accident. Immediately subsequent to calling-out twice and receiving no response, Mr. McSpadden took action, trying to grab the steering wheel. At that moment, the bus hit the median and Mr. McSpadden lost his grip on the steering wheel. The bus then jumped over the median and into the opposing lanes of traffic, still traveling at a high rate of speed. At that point, Mr. McSpadden got up and saw two semi trucks headed for the bus, so he grabbed the wheel and steered the bus left onto the shoulder of the road and then into the ditch to avoid a head-on collision with oncoming traffic. Notably, at this moment, Mr. Ainsworth was still in the driver's seat.

However, the bus took a "pretty violent hit" when it entered the ditch on the far side, then causing the bus to roll side to side. The forceful nature of hitting the ditch caused Mr. McSpadden to hit his head on the ceiling of the bus and fall on the floor. Mr. Ainsworth was tossed into the air and over Mr. McSpadden. Also, the impact caused Mr. Ainsworth to land head-first between the handrail of the bus and the front wheel well located by the front door. Mr. Ainsworth's body was over Mr. McSpadden's legs. Mr. McSpadden freed himself and got behind the wheel of the bus; he then slowed it down, allowing it to come to a final rest after hitting a culvert in the ditch. Although dazed by the incident, Mr. McSpadden turned off the bus, and then went back to and sat in a seat behind the driver's set where the first witnesses at the scene found him. Mr. Ainsworth was left wedged in the bus tight, with the color of his face blue.

Prior to the EMTs arriving on the scene, Mr. Ainsworth did not regain consciousness. Nor did he breathe or make any noise or sound. The ambulance crew extricated Mr. Ainsworth and initiated emergency response. The cardiac monitoring indicated v-fibrillation to Asystole. The crew attempted defibrillation but Mr. Ainsworth was unresponsive and determined to be Asystole. The paramedics initiated CPR with pacing, but without success. The crew then moved Mr. Ainsworth into the ambulance and dispatched him to the hospital. The attending physicians in the emergency room continued CPR for approximately 15 minutes, but with no success. Mr. Ainsworth remained in asystole, resulting in the attending physician, Dr. Barry Waack, pronouncing Mr. Ainsworth dead.

In light of the foregoing, the adjudication of this case requires consideration of whether Mr. Ainsworth died from a sudden cardiac death while in the driver's seat of the school bus, or whether he died from asphyxiation. The claimant does not offer a medical explanation for Mr. Ainsworth losing consciousness and control of the bus. However, and without opposition by the claimant's expert witness, the employer and insurer offer an explanation. Namely, Mr. Ainsworth suffered an arrhythmia event, causing him to loss consciousness and control of the bus.

Accordingly, the parties' dispute appears to center on the question of whether the arrhythmia resulted in a sudden cardiac death, or whether Mr. Ainsworth continued to be alive when wedged tightly in the bus and his neck situated over the handrail, and the positioning of his body caused subsequent death by asphyxiation. The parties offer differing and conflicting medical opinions, with the differing physicians providing objective reasons and criteria for their opinion.

In rendering this decision, I find each physician to be credible. Yet, after consideration and review of the evidence, I resolve the differences in medical opinion in favor of Drs. Nichols and Belz. Simply stated, I find and conclude that Mr. Ainsworth suffered an arrhythmia event, causing him to loss consciousness and control of the bus. Further, I am inclined to believe, and believe it to be more likely true than not, Mr. Ainsworth suffered arrhythmia, ventricular fibrillation and sudden cardiac death.

Notably, at the time of Mr. Ainsworth's death, he presented with a medical condition characteristically susceptible to suffering arrhythmia and ventricular fibrillation, resulting in sudden cardiac death. He was morbidly obese, had an enlarged heart, weighing 600 grams, and his enlarged heart was compromised by hardened arteries. The history of the event is consistent with a person suffering from arrhythmia. And upon hooking Mr. Ainsworth up to the EKG, the paramedics found Mr. Ainsworth to be suffering ventricular fibrillation. As explained by Dr. Belz and Dr. Nichols, and implicitly agreed to by Dr. Norton, when an arrhythmia and ventricular fibrillation occur, the muscles of the heart cannot deliver enough blood, causing the heart muscle to misfire due to a lack of oxygen. When the heart muscles misfire, instead of following a smooth electrical pulse around the heart, a chaotic rhythm develops; the heart does not contract one time but instead wiggles. Without timely defibrillation, when a person suffers ventricular fibrillation, the person blacks out and dies. The heart alone is unable to correct the chaotic rhythm.

In addition, the alternative theory of death, asphyxiation, is not a likely occurrence, insofar as there should have been a physical finding of petichia. Yet, none of the physicians found any evidence of petichia. The coloration of Mr. Ainsworth face is a symptom of his death, supportive of both theories, and not a basis for finding one theory over the other theory. Similarly, the finding of "goose eggs" on Mr. Ainsworth's head is supportive of both theories, and not a basis for finding one theory over the other theory.

Therefore, after consideration and review of the evidence, and relying on the opinions of Drs. Nichols and Belz, I find and conclude that Mr. Ainsworth suffered a natural death on March 24, 2005, and not an injury or death causally related to his work. The Claim for Compensation is denied. Additionally, for the foregoing reasons the health care provider's Application for Direct payment is denied.

Date: ___July 28, 2008_____ Made by: _____/s/ L. Timothy Wilson_____

L. Timothy Wilson
Chief Administrative Law Judge
Division of Workers' Compensation
Signed July 23, 2008

A true copy: Attest:

_____/s/ Jeffrey W. Buker_____
Jeffrey W. Buker
Director
Division of Workers' Compensation

The complexity of the issues and extenuating circumstances merited leaving the record open for submission of additional evidence, and extending

time for issuance of the award.

The assumption by Dr. Norton that Mr. Ainsworth had a heartbeat in the emergency room is an incorrect assumption, not supported by the evidence.