FIRST DISTRICT COURT OF APPEAL
STATE OF FLORIDA

No. 1D17-3342

SCHOOL DISTRICT OF INDIAN RIVER COUNTY/ASCENSION BENEFITS INSURANCE and SOLUTIONS OF FLORIDA/EMPLOYERS MUTUAL, INC.,

Appellants,

v.

EDWARD CRUCE, Deceased Employee, and NOVA CRUCE, Widow and Natural Mother of Benjamin Cruce and Crystal Cruce, Dependent Minors,

Appellees.

On appeal from an order of the Judge of Compensation Claims. Robert L. Dietz, Judge.

Date of Accident: January 1, 2015.

November 27, 2019

M.K. THOMAS, J.

The Employer/Carrier (E/C) challenges a final order finding Edward Cruce's (Employee) death resulted from a workplace

exposure to cryptococcus neoformans fungus. In awarding compensability, the Judge of Compensation Claims (JCC) determined that the heightened standard for toxic exposure under section 440.02(1), Florida Statutes (2014), does not require proof, by clear and convincing evidence, of the quantitative level of exposure in all cases. Regarding the burden of proof for workplace causation, the JCC substituted the alternative standard for exposure under *Festa v. Teleflex, Inc.*, 382 So. 2d 122, 123 (Fla. 1st DCA 1980), for that of section 440.09(1). Because the JCC improperly applied the statutory provisions, we reverse.

I. Facts

The Employee worked as a groundskeeper for the Employer from 1989 until early 2015. Sometime between August and October 2014, the Employer instructed the Employee to move painting supplies and equipment from a storage shed in the football stadium to a storage area in a maintenance building. To facilitate the move, the Employee was obliged to clean out a portion of the maintenance building.

There was evidence that, on several days during this time period, the Employee came home from work covered in a smelly white dust. According to the Employee's wife, the dust was in his beard, nose, and on his lips. The Employee told his wife and daughter that the white dust was "bird crap" and that he was angry to be cleaning out an area containing dead pigeons, live bats, and rodents. In November 2014, the Employee began complaining of headaches. He sought treatment with his family doctor for ear and head pain and was hospitalized in mid-December 2014 when he became unresponsive while at the doctor's office. He was released from the hospital after a few days but re-admitted less than a week later when he collapsed at home. A spinal tap was performed that indicated the presence of budding yeasts that were morphologically consistent with cryptococcus fungus species. Two additional spinal taps confirmed a diagnosis of cryptococcal meningitis. As a result of the meningitis, the Employee died on January 10, 2015.

When the Employee moved his equipment into the maintenance building, it was already being occupied by another groundskeeper, Mr. Simmons. Mr. Simmons had stored his

equipment there since 2010. He went to the maintenance building daily for work tools and to eat his lunch. He assisted the Employee with rearranging the maintenance area to make room for the paint supplies and equipment. According to Mr. Simmons, the move lasted a couple of hours within one workday. He neither saw pigeons or birds nesting or roosting in the maintenance building area or around the stadium nor did he notice bird excrement in the storage area.

After the Employee became ill, the Employer's director of maintenance called an environmental contracting company for recommendations concerning pigeon feces he observed in the swale used for drainage under the stadium. He was advised the area could be sprayed with sealant, but the best course was to leave it undisturbed. The director testified he did not have any testing performed because he was told that the fungus was "prevalent in the environment." Nevertheless, he instructed employees to stay away from the area. The old stands of the stadium were subsequently demolished and rebuilt in 2015; renovations of the underground portion of the stadium, including the maintenance building, were ongoing as late as 2017.

Almost two years after the Employee's death, Claimants (the Employee's widow and two dependent children) filed petitions for benefits seeking death benefits, reimbursement of medical expenditures, and funeral expenses. In the pre-trial stipulation, Claimants requested a determination of whether the Employee suffered compensable injuries as a result of exposure to the cryptococcus fungus based on "prolonged exposure and/or repetitive trauma, and/or in the alternative, an occupational disease." The E/C defended on various grounds, including that the Employee's exposure injury to a toxic substance did not meet the requirements of section 440.02(1) and that Claimants had not satisfied their burden of proof that the Employee's death resulted from an occupational disease under section 440.151, Florida Statutes.

Medical Testimony

Claimants' independent medical examiner (IME), Dr. Feldman, is an internal medicine and infectious disease specialist.

He testified cryptococcus neoformans are commonly found in pigeons and sometimes in fertilizers, dust, bat blood, soil, and birds other than pigeons. According to Dr. Feldman, cryptococcus spores can survive for years in bird droppings. He agreed that cleaning an area with bird feces could cause the spores to become airborne and more easily inhaled. Dr. Feldman suggested that the Employee's duties as a groundskeeper created a greater risk of infection. He ultimately opined that the Employee's infection was the direct result of his exposure to pigeon stool containing high levels of fungus, which exposure most likely occurred when he was cleaning out a storage area in the football stadium as there was no evidence of exposure elsewhere. He testified that the Employee inhaled enough of the cryptococcal neoformans spores to become ill, but he could not identify the actual level of the fungus spores causing his illness and did not know the smallest amount necessary to cause infection. He thought it was extremely unlikely that only one spore would be inhaled in any given case but nevertheless, he believed it possible to develop infection from inhalation of only one.

Dr. McCluskey, the E/C's IME, is an occupational medicine physician with a PhD in toxicology. He testified that cryptococcus neoformans fungus is ubiquitous, or found virtually everywhere, and is present in the soil throughout the United States. It grows particularly well on collected pigeon feces or "guano." However, he found no data on the infection rate in pigeons in the United States. According to Dr. McCluskey, exposure and infection from inhalation of fungus is very common, although the development of meningitis is relatively rare. Nevertheless, the fungus particles must be very small or virtually invisible to be capable of inhalation deep into the lungs.

Dr. McCluskey found no concrete evidence that the Employee was exposed to pigeon feces. Furthermore, the worksite was not tested, and no evidence demonstrated the actual presence of or levels of cryptococcus neoformans fungus at the workplace. In his opinion, no expert could determine when or where the Employee was exposed or why he developed the disease process at that particular time. Further, Dr. McCluskey testified that the presence of bird feces or guano at the workplace would not change

his opinion because "simply seeing some bird-related guano does not necessarily mean that it contains cryptococcus neoformans."

Dr. Callahan, an internal medicine doctor with a fellowship in infectious diseases, served as the expert medical advisor (EMA) pursuant to section 440.13(9), Florida Statutes.[1] He testified that cryptococcal meningitis is most commonly contracted through lung infection when the spore is aerosolized and inhaled. According to Dr. Callahan, it is generally accepted by the medical community that cryptococcal neoformans spores can be found in soil, dust, bat guano, and pigeon feces. Cleaning an area with infected pigeon feces will sufficiently aerosolize the spore to begin the disease process, but to be infected, the feces must come from a pigeon that is a carrier of the fungus. He did not know the smallest spore concentration that would cause infection; however, given the size of the spore, "a very small amount" would be required. He hypothesized that the most likely etiology of the Employee's infection was exposure to pigeon feces while cleaning out the storage area of the old stadium.

Final Hearing and Final Order

At the final hearing, the parties presented the expert testimony and contradictory lay testimony concerning the presence of pigeons, feces, and other potential sources of the fungus at the workplace. Claimants argued that clear and convincing evidence confirmed that the Employee was exposed to a toxic substance, cryptococcus neoformans, at work and at levels that can cause, and did cause, his cryptococcal meningitis.[2] Claimants further asserted that the standard of proof for injuries caused by mold and fungus exposure under section 440.02(1)

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[1] Although Dr. Callahan was the EMA, the JCC also considered and relied upon expert testimony from Drs. Feldman and McCluskey. This issue was not raised on appeal by either party.

[2] Claimants presumably abandoned the theory of occupational disease under section 440.151. The JCC did not award compensability pursuant to section 440.151, and Claimants did not raise the issue on appeal.

required an "impossibility of proof" which violated the constitutional rights of equal protection, due process, and access to courts.[3] At the hearing, Claimants raised for the first time the affirmative "defenses" of spoliation of evidence, estoppel, or avoidance, arguing that the requisite testing was not possible due to passage of time and the destruction of the workplace facility. The E/C objected to the affirmative defenses as untimely. [4]

The E/C argued that the alleged exposure—including the presence of pigeons—was not established by clear and convincing evidence, and Claimants did not otherwise satisfy all of the requirements of section 440.02(1).

In awarding compensability, the JCC determined that Claimants had presented clear and convincing evidence, as required by sections 440.02(1) and 440.09(1), of repetitive or prolonged exposure in the form of a single dose exposure at work sufficient to satisfy their burden of proof. The JCC found satisfactory evidence that the Employee was exposed to pigeons and their droppings at the stadium worksite. However, he noted that "[i]t cannot be determined exactly when or where [the Employee] inhaled the fungus, the amount he inhaled or whether such inhalation was on one or more occasions." The JCC further added, "[r]egardless of where the exposure occurred, the facts are undisputed regarding [the Employee's] exposure to a sufficient level of the spore(s) of cryptococcus neoformans to cause the disease cryptococcal meningitis in question because [he] developed cryptococcal meningitis."

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[3] Claimants abandoned the constitutional challenges on appeal.

[4] Regarding the affirmative defenses raised by Claimants at the hearing, the final order indicated, "[t]he Claimant's arguments in Closing Arguments regarding spoliation, destruction of evidence, estoppel, avoidance or adverse inferences resulting in reverses burdens of proof and the E/C's response that they were not properly raised do not need to be addressed in this Order." Claimants did not raise this issue on appeal.

Acknowledging the heightened standard of proof under section 440.02(1), the JCC nonetheless determined that the statutory directive that exposure be quantifiable (to establish that it *can* cause the injury or disease) may only be construed as applying to "other types of mold where the quantity must reach a critical level to cause the medical condition." Essentially, if inhalation of only one cryptococcal spore can cause cryptococcal meningitis, the statutory requirement for quantification of the level of exposure is rendered moot. Regarding proof required by section 440.09(1) for occupational causation, the JCC applied the less stringent alternative theory of prolonged or repetitive trauma as set forth in *Festa*. 382 So. 2d 122. He found that Claimants presented "clear and convincing evidence [the Employee] was subjected to a greater hazard than that to which the general public is exposed so as to satisfy Claimant's burden of proof as set forth in Section 440.09(1)."

II. Legal Analysis

To the extent this issue involves the JCC's interpretation and application of a statute, it is a question of law subject to the *de novo* standard of appellate review. *See, e.g.*, *Lanham v. Dep't of Envtl. Prot*., 868 So. 2d 561, 562 (Fla. 1st DCA 2004). Otherwise, where the question is whether clear and convincing evidence was presented to support the JCC's holding, our standard of review regarding the sufficiency of evidence to satisfy the statute is competent substantial evidence. *See McKesson Drug Co. v. Williams,* 706 So. 2d 352, 353–54 (Fla. 1st DCA 1998).

In 2003, the Florida Legislature amended the definition of "accident" in section 440.02(1), to impose a heightened standard of proof for toxic exposure claims as follows:

> An injury or disease caused by exposure to a toxic substance, including, but not limited to, fungus or mold, *is not an injury by accident* arising out of the employment *unless there is clear and convincing evidence* establishing that exposure to *the specific substance involved, at the levels to which the employee was exposed,* can cause the injury or disease sustained by the employee.

§ 440.02(1), Fla. Stat. (2003) (emphasis added).

Post-amendment, section 440.02(1) now focuses on a "dose-response" relationship requiring: 1) proof of actual exposure (ingestion or absorption); 2) the levels to which one is exposed (dose); and 3) that such levels are capable of causing injury or disability. *See Matrix Emp. Leasing v. Pierce*, 985 So. 2d 631, 633-34 (Fla. 1st DCA 2008) (holding the amended language of section 440.02(1) "expressly requires both a higher standard of proof ('clear and convincing evidence') and a certain degree of specificity as to the 'specific substance involved' and the 'levels to which the employee was exposed' before an injury from toxic exposure can be found compensable."); *Crown Diversified Indus. Corp. v. Prendiville*, 263 So. 3d 103, 106 (Fla. 1st DCA 2018) ("Section 440.02(1) restricts conclusions that exposure arose out of employment unless there is clear and convincing evidence establishing that there was 'exposure to the specific substance involved at [harm-causing] levels.'"). The Legislature created a rebuttable presumption that injury or disease caused by toxic exposure is not an injury by accident arising out of employment.

In the final order, the JCC recognized that the clear and convincing evidence standard in section 440.02(1), which includes establishment of the *level* of exposure, implies quantitative testing. But, the JCC reasoned that to require quantitative testing for a "ubiquitous" fungus would create an impossible burden because the employee could not know exactly when the exposure to the fungus occurred. The JCC further noted that by the time litigation was initiated in this case, Claimants could not perform testing because the stadium had been destroyed. He concluded that, even if the worksite had not been destroyed, any measurement for the fungus was essentially meaningless unless performed at the time of the exposure. This interpretation is in derogation of the requirements of section 440.02(1).

Here, all medical experts agree that cryptococcus fungus is ubiquitous. However, the JCC misconstrued the ubiquitous nature of the cryptococcus fungus in the sense that it can be found anywhere, not that it is present everywhere.[5] It seems

[5] Dr. Feldman, whose opinion was expressly accepted by the JCC, testified that the fungus was ubiquitous because it *could* be found almost anywhere. He agreed it was not present everywhere

counterintuitive to interpret section 440.02(1) as not requiring evidence of the presence of the fungus at the workplace, given that there is evidence that the fungus capable of causing the injury or disease may also be present anywhere else.

The JCC excused Claimants from the burden of proving the level of exposure allegedly suffered by the Employee. In doing so, the JCC explained that the facts surrounding the specific disease process here dispensed with the need for proof of quantitative levels. Specifically, the medical evidence established that the inhalation of only one spore of the cryptococcal fungus could cause disease.[6] Because section 440.02(1) only requires evidence that the level of exposure *can* cause disease, the JCC regarded the specific measurement of the exposure level to be unnecessary because the Employee "had only been exposed at the worksite," inhalation of only one spore could cause an infection, and the Employee was unquestionably diagnosed with cryptococcal meningitis. However, this reasoning disregards a critical component also required for a finding of compensability—clear and convincing evidence that the exposure occurred in the course and scope of the employment. *See* §440.09(1), Fla. Stat. (2014).

Section 440.09(1) requires that the employee show a causal connection between the employment and the alleged exposure injuries. Just as section 440.02(1) dictates that the substance and the level of exposure be "specifically" proven, section 440.09(1) likewise requires proof of occupational causation with specificity and by clear and convincing evidence.

Expert testimony that cryptococcus fungus is a ubiquitous does not alone constitute clear and convincing evidence sufficient to satisfy the burden of proving workplace presence. This Court

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at the same time.

[6] In so doing, the JCC overstated the medical evidence. All the medical experts testified they did not know the exact minimal exposure necessary to cause disease. At best, Dr. Feldman opined that he thought it *possible* to become infected from one spore, but that it was also unlikely that the level of exposure would ever be limited to just one.

has previously condemned broad assumptions and speculation in this context. *See Prendiville*, 263 So. 3d at 106 (reversing award of compensability based on expert testimony which found that the employee had been infected at work from "whatever mold or substances were in that building"). When the injury at issue involves disease, "evidence of causation must be shown by something more than that it is merely logical that the injury arose out of the claimant's employment." *Wiley v. Se. Erectors, Inc.*, 573 So. 2d 946, 948 (Fla. 1st DCA 1991) (citing *Harris v. Josephs of Greater Miami, Inc.,* 122 So. 2d 561, 562 (Fla.1960)). "Causal relationship must be shown by clear evidence rather than speculation or conjecture." *Id. (*citing *Norman v. Morrison Food Servs.,* 245 So. 2d 234, 236 (Fla.1971)).

Initially, in contemplating that inhalation of one spore of the cryptococcal fungus was sufficient to cause infection, the relevant level of exposure at work under section 440.02(1) is exactly that: at least one spore. Secondly, although the evidence supports the JCC's finding that the Employee was exposed to pigeon feces and guano, the toxic substance causing disease was the cryptococcus fungus, not the feces. Accepting the JCC's application of sections 440.02(1) and 440.09(1) would eviscerate the Legislative enactment of the heightened burden of proof and essentially apply the less stringent, three-pronged test of *Festa*. 382 So. 2d at 122.

Festa set forth the test for establishing compensability of a repetitive trauma claim under Chapter 440, Florida Statues. *Id*. Under the *Festa* test, an employee could recover benefits for an injury from exposure by showing: "1) prolonged exposure, 2) the cumulative effect of which is injury or aggravation of a pre-existing condition; and 3) that he [or she] has been subjected to a hazard greater than that to which the general public is exposed." *Id.* at 124. Alternatively, a claimant could "demonstrate a series of occurrences, the cumulative effect of which is injury." *Rodriguez v. Frito-Lay, Inc.*, 600 So. 2d 1167, 1172 (Fla. 1st DCA 1992).

In *Gibson*, this Court reversed the JCC's order finding claimant's mold exposure compensable "because no record evidence establishe[d] the levels of mold to which Claimant was exposed in the workplace, a statutory condition imposed by section 440.02(1), Florida Statutes (2005)." *Altman Contractors v. Gibson*,

63 So. 3d 802, 803 (Fla. 1st DCA 2011). This case presents far less evidence than that contemplated in *Gibson* and other toxic exposure cases previously reviewed by this Court. *See id.*; *Prendiville,* 263 So. 3d 103; *Pierce*, 985 So. 2d 631. As in *Gibson*, the JCC "erred in substituting the causation standard expressed in *Festa* . . . for the more exacting statutory causation standard for mold exposure claims enacted by the Legislature." *See Gibson,* 63 So. 3d at 803 (citing *Mangold v. Rainforest Golf Sports Ctr.*, 675 So. 2d 639, 642 (Fla. 1st DCA 1996) (holding that it is presumed substantial, material statutory change by Legislature is intended for some specific objective or alteration of law, in absence of clear contrary indication)).

In the final order, the JCC also implied that direct evidence of the presence of the cryptococcus fungus at the workplace was unnecessary because there was no evidence of non-workplace exposure other than when the Employee mowed his own lawn. Given the JCC's emphasis on the ubiquitous nature of cryptococcus fungus, it is unclear why other sources of exposure were discounted. Regardless, the JCC's implication here is in error to the extent it suggests that the E/C bore the burden of disproving the worksite as the place of exposure by introducing evidence of non-workplace exposure. The initial burden of proving the existence and levels of toxic substances at the workplace lies with the employee. *See Alston v. Etcetera Janitorial Servs.*, 634 So. 2d 1133, 1134 (Fla. 1st DCA 1994); *Bray v. Elec. Door-Lift, Inc.*, 558 So. 2d 43, 45-46 (Fla. 1st DCA 1989); *Deahl v. Uni-Pak Corp.,* 550 So. 2d 122, 123-24 (Fla. 1st DCA 1989); *Ralosky v. Dynamic Builders, Inc.*, 500 So. 2d 193, 195 (Fla. 1st DCA 1986). Proof of causation is wholly the employee's and the employer/carrier is under no obligation to produce evidence to disprove the claim. *Pierce*, 985 So. 2d at 634 (citing *Tillman*,765 So. 2d at 124).

Notwithstanding the plain language of sections 440.02(1) and 440.09(1), the JCC excused Claimants from the required burden of proof to overcome the presumption that injury or disease caused by exposure to a toxic substance is not an injury by accident arising out of the employment. Furthermore, competent substantial evidence does not support the JCC's determination that Claimants satisfied, by clear and convincing evidence, their burden of proving occupational causation.

III. Conclusion

Because Claimants failed to satisfy the burden of proof established by sections 440.02(1) and 440.09(1), the order is reversed. We find it unnecessary to reach the remaining issues raised by the E/C.

REVERSED.

WOLF, J. concurs in result only; RAY, C.J., concurs in result with written opinion.

Not final until disposition of any timely and authorized motion under Fla. R. App. P. 9.330 or 9.331.

RAY, C.J., concurring in result.

In my view, we are compelled to reverse the order on appeal because the JCC applied the wrong standard when he found a compensable injury from exposure to a fungus. Section 440.02(1), Florida Statutes (2014), expressly applies to injury or disease caused by exposure to fungus, and the statute's plain and unambiguous language requires proof of the specific substance causing injury as well as the level of exposure.

Despite finding no evidence to show the quantitative level of exposure in this case, the JCC ultimately concluded that Claimants established a compensable workplace injury from exposure under an alternative theory of prolonged or repetitive trauma under *Festa v. Telefex*, 382 So. 2d 122, 123 (Fla. 1st DCA 1980). But this Court previously held that the *Festa* causation test cannot substitute for the more exacting standard imposed by section 440.02(1). *See Altman Contractors v. Gibson*, 63 So. 3d 802, 803 (Fla. 1st DCA 2011).

Therefore, because the JCC erred by failing to apply section 440.02(1), I concur with the majority decision to reverse the order below.

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