



order maintained Child's placement in kinship care with his paternal grandmother. Upon careful review, we affirm.

The juvenile court set forth sixty-six factual findings in the order, which the testimonial evidence supports. **See** Order of Adjudication and Disposition, 11/7/19, at 1-6.

On June 20, 2019, Parents took Child, then five-weeks-old, to his pediatrician, Megan Kilpatrick, M.D., for evaluation of bruises on his chin, left cheek, right palm, third finger, and right leg. Order, 11/7/19, at ¶¶ 7-8. Dr. Kilpatrick sent Child by ambulance to Children's Hospital of Pittsburgh (CHP), where he was diagnosed with "bruising in multiple aspects of the body."<sup>1</sup> **Id.** at ¶ 10; N.T., 9/30/19, at 58. In addition, CHP performed x-rays of all of Child's bones, namely, a "skeletal survey," which revealed "metaphyseal fractures of the right distal femur, right proximal tibia and the left proximal tibia. Metaphyseal fractures of the right and left distal tibia were also noted

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<sup>1</sup> Adelaide Eichman, M.D., a pediatrician at the Child Advocacy Center at CHP, testified that Child had bruises on the "front of his chin, one at the left front of his chin, one under his lower lip, and one on his left upper cheek." N.T., 9/30/19, at 56. In addition, Dr. Eichman testified that Child had a bruise on the back of his right knee which was "approximately 6 by 3 cm" in size, and "[i]t started above the knee, and went clearly to the end of the knee." **Id.** at 57. Child also had an "approximately 1 cm bruise" on his right upper thigh, and he had bruising on his right wrist and palm. **Id.**

on the original skeletal survey of June 20, 2019.<sup>[2]</sup> Suspected acute fractures of the right lateral 7, 8 and 9 ribs were noted on the June 20, 2019, skeletal survey. . . .”<sup>3</sup> Order, 11/7/19, at ¶ 12. In addition, the skeletal survey indicated that Child’s right wrist, although bruised, was not fractured. N.T., 9/30/19, at 148-49. The CHP physicians who examined Child on June 20, 2019, assessed Child’s injuries as “diagnostic for physical child abuse,” and opined that the injuries “caused substantial pain at the time they were inflicted.” CYS Exhibit 3.

On June 21, 2019, the juvenile court removed Child from Parents’ custody and placed him in the emergency protective custody of Beaver County Children and Youth Services (CYS). The emergency order placed Child in kinship care with his paternal grandmother. Following a shelter care hearing on June 24, 2019, the court continued Child’s placement.

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<sup>2</sup> As best we can discern from the record, “metaphyseal fractures” are also known as “corner fractures” or “bucket fractures,” and they were present in both of Child’s legs. Sheila Moore, M.D., a pediatric radiologist at CHP, explained that Child’s June 20, 2019 skeletal survey revealed “corner fractures in the bones, distal femur and distal tibia. . . . [C]orner fractures are fractures at the end of the shaft of the bone where the growth plate is, and they are considered to be fairly specific for non-accidental trauma because it requires force that is a pull and twist. And so when we see those, it’s very concerning.” N.T., 9/30/19, at 148.

<sup>3</sup> CHP performed a second skeletal survey on Child at his follow-up appointment on July 2, 2019, which confirmed that his lateral 7th, 8th, 9th ribs were fractured, and were in the process of healing. In addition, the above-described fractures in Child’s legs were in the process of healing on that date. N.T., 9/30/19, at 65.

On June 25, 2019, CYS filed a dependency petition alleging that Child was without proper care and control pursuant to 42 Pa.C.S.A. § 6302, and that he was a victim of child abuse as defined by 23 Pa.C.S.A. § 6303. In July of 2019, CYS filed a motion for aggravated circumstances against Parents.

On July 23, 2019, prior to the hearing on CYS's petitions, Parents took Child to Thomas Kuivila, M.D., a pediatric orthopedic surgeon at the Cleveland Clinic, for a second opinion on whether Child's injuries were caused by non-accidental trauma. **See** Father's Exhibit B. Following new x-rays of Child, Dr. Kuivila noted his impression that Child's bone injuries were caused by "a subtle metabolic issue." **Id.** Dr. Kuivila evaluated Child in his follow-up appointment on August 13, 2019, when additional x-rays were performed. On that date, Dr. Kuivila referred Child to a pediatric endocrinologist for the purpose of obtaining a "screening DNA sequencing" to "further evaluate the bone quality." N.T., 9/30/19, at 227. Specifically, Dr. Kuivila recommended that Child have genetic testing for osteogenesis imperfecta.<sup>4</sup> **Id.** at 228.

On September 30, 2019, the court held a hearing on CYS's requests for a finding of child abuse, an adjudication of dependency, and a finding of

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<sup>4</sup> Dr. Kuivila testified that "one of the most common" disorders causing "bone fragility" is osteogenesis imperfecta. N.T., 9/30/19, at 219. He testified that osteogenesis imperfecta involves a collagen disorder caused by a genetic mutation. **Id.** at 258. Dr. Kuivila acknowledged on cross-examination that "only between 20,000 and a maximum of 50,000 in the United States have been diagnosed with this condition." **Id.** at 257.

aggravated circumstances. On that date, Parents were awaiting a preliminary hearing on criminal charges filed on August 8, 2019 relating to Child's injuries, including aggravated assault, endangering the welfare of children, and simple assault. Parents were out of prison on bond and present for Child's adjudication hearing. Parents were represented by separate counsel.<sup>5</sup>

CYS presented the testimony of the following witnesses: Nicholas Ashley, police officer; Adelaide Eichman, M.D., and Sheila Moore, M.D., *via* telephone, medical experts in pediatric child abuse and pediatric radiology from CHP; Megan Kilpatrick, M.D., *via* telephone, Child's pediatrician from Children's Community Pediatrics (CCP); and Roxanne Cripe, CYS caseworker.

In addition, CYS introduced into evidence, and the court admitted, 11 exhibits, including the *curriculum vitae* of Dr. Eichman; a PowerPoint created, in part, by Dr. Eichman to aid her testimony; medical consult notes and addenda of Carmen Coombs, M.D., and Rachel Berger, M.D., physicians from the CHP Child Advocacy Center, which included color photographs of Child's bruises; Child's discharge summary; *curriculum vitae* of Dr. Moore; Dr. Moore's radiology reports; Dr. Kilpatrick's medical records from Child's one-month well visit on June 17, 2019; and the CYS family finding report.

Father presented the testimony of Dr. Kuivila, *via* telephone, medical expert in pediatric orthopedic surgery; Christopher Olbrich, Child's current

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<sup>5</sup> Child was represented by a guardian *ad litem* (GAL), who filed an appellee brief in support of the underlying order.

primary care physician; and Rev. Tony Gargotta and Ryan Sweeney, character witnesses. In addition, Father introduced into evidence, and the court admitted, five exhibits, including Dr. Kuivila's *curriculum vitae*; Dr. Kuivila's medical notes from Child's appointments on July 23<sup>rd</sup> and August 13, 2019; and radiology reports from those same dates. Finally, Mother presented the testimony of Casey Darnley, character witness.

After the hearing, the court determined that Child was a victim of abuse and adjudicated him dependent. In doing so, the court found that Child was exclusively in the care of Parents during the relevant time-period. Order, 11/7/19, at ¶¶ 27, 51. Based upon credibility determinations in favor of Dr. Eichman and Dr. Moore, the court stated:

The type of injuries are of such a nature as would normally not be sustained or exist except by reason of the acts or omissions of the parent. . . . These injuries placed [Child] in substantial pain[,] and the explanation proffered by Parents is entirely inconsistent with the findings of the credible . . . medical expert testimony presented by [CYS,] all of whom opined that the injuries were caused by child abuse.

**Id.** at ¶ 26. By separate order that day, the court denied CYS's motion for aggravated circumstances.

On November 25, 2019, Mother, acting *pro se*, filed a notice of appeal and concise statement of errors complained of on appeal pursuant to Pa.R.A.P. 1925(a)(2)(i) and (b). The same day, Father, through counsel, filed a notice of appeal and concise statement of errors complained of on appeal pursuant to Pa.R.A.P. 1925(a)(2)(i) and (b). This Court consolidated Mother's and

Father's appeals *sua sponte* on December 18, 2019. On December 24, 2019, the juvenile court filed its opinion pursuant to Pa.R.A.P. 1925(a).

Parents present the following issue for review:<sup>6</sup>

Whether the [juvenile] court erred in finding the evidence was sufficient to establish that [Child] was a dependent child under . . . 42 Pa.C.S. § 6302 and an abused child under . . . 23 Pa.C.S. § 6303?

Parents' Brief at 3.

Our standard of review in dependency cases is as follows:

[T]he standard of review in dependency cases requires an appellate court to accept the findings of fact and credibility determinations of the trial court if they are supported by the record, but does not require the appellate court to accept the lower court's inferences or conclusions of law. Accordingly, we review for an abuse of discretion.

***In re R.J.T.***, 9 A.3d 1179, 1190 (Pa. 2010) (citation omitted).

This Court has explained:

Dependency proceedings concern themselves with the correction of situations in which children are lacking proper parental care or control. A dependent child is one who "is without proper parental care or control . . . necessary for his physical, mental, or emotional health. . . ." 42 Pa.C.S.A. § 6302. Whether a child is lacking proper parental care and control encompasses two discrete questions: (1) Is the child at this moment without proper parental care or control? and (2) If so, is such care and control immediately available? The burden of proof in a dependency proceeding is on the petitioner . . . who must show [that] the juvenile is without proper parental care, and that such care is not available immediately. Both of these determinations must be supported by clear and convincing evidence. Such a conclusion requires that

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<sup>6</sup> As mentioned above, Parents are represented by separate counsel on appeal. Parents have filed separate, but identical, briefs. When we cite to Parents' briefs, we will cite to the page numbers in Mother's brief.

testimony be so clear, direct, weighty, and convincing as to enable the trier of facts to come to a clear conviction, without hesitancy, of the truth of the precise facts in issue.

A finding of abuse may support an adjudication of dependency. When the court's adjudication of dependency is premised upon physical abuse, its finding of abuse must be supported by clear and convincing evidence. However, its findings as to the identity of the abusers need only be established by prima facie evidence that the abuse normally would not have occurred except by reason of acts or omissions of the caretakers (parents).

***In re C.R.S.***, 696 A.2d 840, 842-843 (Pa. Super. 1997) (citations omitted).

We have stated that the Child Protective Services Law (CPSL) "controls determinations regarding findings of child abuse, which the juvenile courts must find by clear and convincing evidence." ***In re L.V.***, 209 A.3d 399, 417 (Pa. Super. 2019) (citations omitted). "Clear and convincing evidence" requires:

that the witnesses must be found to be credible; that the facts to which they testify are distinctly remembered and the details thereof narrated exactly and in due order; and that their testimony is so clear, direct, weighty, and convincing as to enable the trier of fact to come to a clear conviction, without hesitancy, of the truth of the precise facts in issue. It is not necessary that the evidence be uncontradicted, provided it carries a clear conviction to the mind or carries a clear conviction of its truth.

***In the Interest of J.M.***, 166 A.3d 408, 423 (Pa. Super. 2017) (citing ***In re Novosielski***, 992 A.2d 89, 107 (Pa. 2010) (citations omitted)).

Section 6303 of the CPSL defines "child abuse" in relevant part:

**§ 6303. Definitions.**

. . .

**(b.1) Child abuse.** — The term "child abuse" shall mean intentionally, knowingly or recklessly doing any of the following:

**(1) Causing bodily injury to a child through any recent act or failure to act.**

...

**(5) Creating a reasonable likelihood of bodily injury to a child through any recent act or failure to act.**

23 Pa.C.S.A. § 6303(b.1)(1), (5). “Bodily injury” is defined as “[i]mpairment of physical condition or substantial pain.” 23 Pa.C.S.A. § 6303(a).

Our Supreme Court has stated that the identity of the perpetrator of child abuse “need only be established through *prima facie* evidence in certain situations. . . .” ***In the Interest of L.Z.***, 111 A.3d 1164, 1174 (Pa. 2015). *Prima facie* evidence is “[s]uch evidence as, in the judgment of the law, is sufficient to establish a given fact, or the group or chain of facts constituting the party’s claim or defense, and which if not rebutted or contradicted, will remain sufficient.” ***Id.*** at 1184 (citing Black’s Law Dictionary 825 (6<sup>th</sup> ed. abridged 1991)). Section 6381(d) of the CPSL provides:

**§ 6381. Evidence in court proceedings.**

...

**(d) *Prima facie* evidence of abuse.** — Evidence that a child has suffered child abuse of such a nature as would ordinarily not be sustained or exist except by reason of the acts or omissions of the parent or other person responsible for the welfare of the child shall be *prima facie* evidence of child abuse by the parent or other person responsible for the welfare of the child.

...

23 Pa.C.S.A. § 6381(d). The ***L.Z.*** Court held:

[E]vidence that a child suffered injury that would not ordinarily be sustained but for the acts or omissions of the parent or responsible person is sufficient to establish that the parent or responsible person perpetrated that abuse unless the parent or responsible person rebuts the presumption. The parent or responsible person may present evidence demonstrating that they did not inflict the abuse, potentially by testifying that they gave responsibility for the child to another person about whom they had no reason to fear or perhaps that the injuries were accidental rather than abusive. The evaluation of the validity of the presumption would then rest with the trial court evaluating the credibility of the *prima facie* evidence presented by the CYS agency and the rebuttal of the parent or responsible person.

***In re L.Z.***, 111 A.3d at 1185 (footnote omitted).

On appeal, Parents do not dispute that Child sustained injuries and was in their sole custody during the relevant time-period. Rather, Parents dispute that Child's injuries were caused by non-accidental trauma. Specifically, they contend that Child's injuries occurred during normal care as a result of osteogenesis imperfecta. After careful consideration, we find this argument unavailing.

Dr. Eichman, an expert in pediatric child abuse from the CHP Child Advocacy Center, testified about the injuries Child presented on June 20, 2019, as documented in the CHP medical records. N.T., 9/30/19, at 55-57. Significantly, Dr. Eichman testified that CHP tested Child for underlying conditions that would explain his bruises and bone fractures. With respect to his bruises, CHP evaluated Child for an underlying bleeding disorder. ***Id.*** at 58. Dr. Eichman testified that Child had "routine trauma and bleeding labs, meaning to evaluate for a bleeding disorder. Those were normal." ***Id.***

Likewise, with respect to Child's bone fractures, Dr. Eichman testified that Child had "blood work to screen for a metabolic bone disease. His vitamin D, PTH,<sup>[7]</sup> calcium, and phosphorus were all normal." *Id.* at 59.

Dr. Eichman did not personally examine Child on June 20, 2019. However, she testified regarding the assessment of her colleague at the CHP Child Advocacy Center, Carmen Coombs, M.D., who examined Child on that date.

Q. On page 5 of the report, Dr. Coombs opined that "Bruising in a young infant is very rare and always warrants further evaluation. [Child]'s exam is particularly worrisome as there are multiple bruises in different locations. No accidental history was provided to explain the bruising."

Can you elaborate on that a little bit? Do you agree with her assessment, and why or why not is the bruising significant?

A. I do agree with her assessment. At the time [Child] was a non-mobile infant. It is very rare for . . . children to have bruising . . . when they are not able to move and cause their own bruises. I do agree with her assessment.

Q. And in your capacity as a physician who works specifically with pediatric child abuse and in your role as an expert in that field, . . . do you associate bruising typically with child abuse if there is no underlying disorder to explain it?

A. Yes. It's very worrisome for that, yes.

Q. [I]f we look at the Coombs Report No. 2, on the final page of that report there is an addendum by Dr. Coombs in which she opines that the injuries were diagnostic for physical abuse and would have caused substantial pain at the time they were inflicted. Again, do you agree with that assessment . . . ?

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<sup>7</sup> As best we can discern, PTH is an abbreviation for "parathyroid hormone."

A. I do agree with that assessment.

**Id.** at 61-62. In addition, Dr. Eichman testified that she agreed with the opinion of her colleague at CHP Child Advocacy Center, Rachel Berger, M.D., who examined Child, reviewed his test results, and spoke with Parents on June 21, 2019, the date of his hospital discharge.

The injuries are diagnostic for child abuse. There is no accidental mechanism which could cause them. These injuries do not occur as part of normal childcare. [Child] had no underlying medical condition which would predispose him to these injuries. He did not cause them himself. If this five-week-old is returned to the same environment, he is likely to be reinjured or killed.

**Id.** at 63.

Dr. Eichman examined Child during his follow-up appointment at CHP on July 2, 2019. She testified that Child “did not have any new bruises, and his prior bruising had resolved.” **Id.** at 59-60. Further, Dr. Eichman testified that Child underwent another skeletal survey that day, which revealed that he “had not sustained any new fractures in the interval between hospital discharge and the follow-up appointment.” **Id.** at 60.

Dr. Eichman also spoke to Parents on July 2, 2019. She testified:

Q. [W]ere [Parents] able to offer you any explanation as to how [Child] received the bruising and the fractures that you have observed?

A. Father did provide or share . . . a video of him playing with the baby as a possible mechanism for the child’s injuries.

Q. And what was occurring in that video?

A. Father was holding the baby on the chest essentially, and . . . [F]ather was pretending to have the baby dance on what looked like a footstool.

Q. And did you believe after viewing that video that that would have been a possible explanation for the bruises and fractures that the child had received?

A. No.

**Id.** at 63-64.

Dr. Eichman opined, to a reasonable degree of medical certainty, that Child “has been the victim of physical child abuse.” **Id.** at 72. She explained:

[Child] had been a five-week old infant with multiple bruises and fractures. His injuries were the result of trauma. There was no history of trauma provided to explain the child’s injuries. The child did not have evidence of a medical disorder to explain his injuries. It was my assessment and my medical diagnosis that the child had been the victim of physical child abuse. When in a safe environment, [Child] did not sustain any new injuries.

**Id.** at 60.

Dr. Eichman was questioned on both direct and cross-examination with respect to Parents’ theory that Child’s injuries occurred during normal care and were caused by osteogenesis imperfecta.<sup>8</sup> Dr. Eichman reviewed the medical records pertaining to the diagnostic testing of Child performed at the

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<sup>8</sup> It is unclear on this record whether osteogenesis imperfecta is a metabolic bone disease. Dr. Eichman opined on cross-examination by Father’s counsel that osteogenesis imperfecta is a genetic disorder, not a metabolic bone disease. N.T., 9/30/19, at 93; **see also** N.T., 9/30/19, at 82, 90-92. Dr. Kuivila testified that osteogenesis imperfecta is a genetic disorder, but he was unclear whether it is a condition distinct from metabolic bone disease.

Cleveland Clinic after July 2, 2019, and she testified to the test results. First, on direct examination, she testified that an endocrinologist, whom she identified as Dr. Haider, ordered testing to evaluate Child for a metabolic bone disease. N.T., 9/30/19, at 67. Dr. Eichman testified that the medical record dated August 23, 2019, indicated that Child's testing in this regard "was normal. . . ." <sup>9</sup> **Id.** Second, Dr. Eichman reviewed the radiology reports dated July 23, 2019, and August 13, 2019, and she testified that they revealed that no new fractures had occurred. **Id.** at 69. Third, she testified that Child was tested for the alleged genetic disorder, osteogenesis imperfecta, "and his testing [results were] normal." **Id.** at 94.

Further, with respect to osteogenesis imperfecta, Dr. Eichman testified that Child's "clinical presentation is not consistent with [it] . . . [b]ased on the fact that the child presented with bruising and was found to have particular types of fractures. In addition, . . . if the child had an underlying genetic condition, this would continue to affect the child throughout [his] lifetime and not be resolved by a change in home environment." **Id.** at 98. She explained:

Q. [I]f, in reviewing the follow-up lab result and the x-rays [performed at the Cleveland Clinic], if this were a metabolic bone condition or some sort of genetic predisposition that caused these injuries as opposed to non-accidental trauma, what would you expect to see in the lab results or the follow-up x-rays?

A. [I]f it were a metabolic bone disease, I would expect to see an abnormality of the child's laboratory studies. This was not the

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<sup>9</sup> Based on our review, the August 23, 2019 medical record from the endocrinologist does not appear in the certified record.

case. The child's laboratory studies were checked here at [CHP] and then repeated at Cleveland Clinic and were normal.

If the child did have a genetic predisposition or a metabolic bone disease that was untreated, I would expect the child to continue to sustain injury if it were due to a medical cause that was untreated. That has not been the case. [Child] has not sustained any new injuries.

Q. And would a metabolic bone condition explain the bruising on the child?

A. No.

**Id.** at 70-71.

Finally, we note Dr. Eichman's familiarity with the common "visual signs" of osteogenesis imperfecta. She testified on cross-examination by Father's counsel:

Q. So what visual signs of osteogenesis imperfecta are you aware of?

A. [P]eople with osteogenesis imperfecta, as you pointed out before, can have blue sclera.<sup>[10]</sup> This is not a specific finding of osteogenesis imperfecta. **Presence or absence does not make the diagnosis.**<sup>[11]</sup>

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<sup>10</sup> As best we can discern, "blue sclera" consists of a blue coloration of the whites of the eyes.

<sup>11</sup> Dr. Eichman testified on cross-examination by Father's counsel that she checked Child's eyes for blue sclera. N.T., 9/30/19, at 86. She testified, "That is something that I would note if it were positive." **Id.** at 88. Dr. Eichman stated, "I did not note that [Child's] eyes were abnormal." **Id.**

In terms of other findings of osteogenesis imperfecta, x-rays, Wormian bones<sup>[12]</sup> are often seen, particularly the skeleton. Often the bones look abnormal. Little kids have larger head circumferences than the body.

But the findings vary. . . .

**Id.** at 93-94 (emphasis added).

Dr. Sheila Moore, a pediatric radiologist at CHP, was requested by CYS to review and evaluate Child's CHP x-rays and the Cleveland Clinic's July 23 and August 13, 2019 x-rays. She issued two reports, dated August 20 and 29, 2019. **See** CYS Exhibits 8 & 9. Dr. Moore testified that to a reasonable degree of medical certainty, the x-rays from both medical institutions demonstrated Child had the above-described corner fractures in his legs and rib fractures which correlated with non-accidental trauma and not metabolic bone disease or osteogenesis imperfecta.<sup>13</sup> N.T., 9/30/19, at 155-156, 158. She explained that corner fractures are "considered very characteristic of non-accidental trauma because the only way those can happen in little children is a pulling and twisting. . . . The other thing is the rib fractures. A child should not have rib fractures. And rib fractures are actually the most common fractures that we do see with non-accidental trauma." **Id.** at 155.

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<sup>12</sup> Dr. Eichman did not define "Wormian bones."

<sup>13</sup> Dr. Moore opined that the corner fractures in Child's legs portrayed in the June 20, 2019 x-rays were "a week old to two weeks old, and the [fractures] in [his] ribs were perhaps just a day old." N.T., 9/30/19, at 167.

With respect to metabolic bone disease, Dr. Moore testified on direct examination:

Q. Do [Child]'s . . . x-rays conform with what you would expect to see in a metabolic bone condition?

A. No, they do not.

Q. And how do they differ?

A. Well, for one thing, the bone mineral is normal, and that's why I specifically mentioned in the impression that there is no osteopenia. Osteopenia means that the bones are thin or that they don't have as much calcium, they don't have as much bone mineral. And so that would be the first thing that you would typically see with the metabolic bone disease is the bones would look . . . less if you will on the x-rays, less dense, less calcium, less mineral, and I did not see that. So that's number one.

Number two . . . the most common metabolic bone diseases would have changes at the growth plate, but the changes are resorption. **So it doesn't look like a fracture.** It's not a little piece of bone sticking up. But rather you might see the growth plate looking wide, or there's something we call cupping which is where the end of the bone, the metaphyses[,] or where the growth plate is that that gets wider and scoops out, hollows out like a cup. And so you see that with the characteristic appearance. Other . . . abnormalities of bone might show densities in those regions.

So . . . it depends on . . . what the disease is. But it's at all of the areas, all of the growth plates, not just one or two, not just one side. It would have to affect everything equally pretty much.

Q. And that is not what you viewed in this case; is that correct?

A. That's correct.

**Id.** at 153-55 (emphasis added). Further, on cross-examination by Father's counsel, Dr. Moore testified, "From my reading, my interpretation, my

knowledge of doing this for 30 years, there is no evidence of metabolic bone disease on the radiograph[s].” **Id.** at 164.

With respect to osteogenesis imperfecta, Dr. Moore testified on direct examination:

Q. [D]o [Child]’s records conform with what you would expect to see with [osteogenesis imperfecta]?

A. No, they do not, but sometimes . . . it could be something that you see later in life. So I thought it was a good idea to test him for it since that has been raised, because you don’t always see it right away. But usually what you see is, again, the same thing with the bones, . . . not as dense, and he did not have that.

**Id.** at 155.

To rebut the medical opinions of Dr. Eichman and Dr. Moore, Father presented the testimony of Dr. Kuivila as a medical expert in pediatric orthopedic surgery. Pertinently, Dr. Kuivila’s testimony related only to Child’s bone injuries, which he ultimately concluded were corner fractures that had healed by the date of the subject proceeding. N.T., 9/30/19, at 254-55. Dr. Kuivila did not provide testimony as to the causation of Child’s bruises. On direct examination, he testified that he was shown “a photo” of Child at his first appointment on July 23, 2019, which he was told was taken on June 20, 2019. **Id.** at 235. Dr. Kuivila testified, “It didn’t look like a bruise to me.”

**Id.** at 236. On cross-examination by CYS, he testified:

Q. [I]n terms of the bruising, the picture that you were referring to, where was the bruise located?

A. I believe it was on the thigh, if memory serves.

Q. And . . . were you able to review any of the records from [CHP]?

A. Yes.

Q. And in those records there would have been photographs of [Child] that showed four separate small facial bruises, a bruise on his knee that started above the knee and ended below the knee, a bruise on his upper thigh, a right hand bruise, and the right hand bruise was to his palm and wrist. Did you review any of those photographs?

A. I did not see those. No, I did not.

**Id.** at 250-51. Dr. Kuivila testified, "Any time a bone is broken, there's some bleeding that occurs. . . ." **Id.** at 251. However, he testified on cross-examination:

Q. Absent an explanation as to what caused the . . . fractures[,] specifically in his legs and his ribs, . . . what would be the explanation for the bruising on his hand at his wrist?

A. I would not have an explanation for bruising in an area that did not have an underlying fracture.

**Id.** at 252.

With respect to Child's bone injuries, Dr. Kuivila testified that the CHP x-rays "demonstrated particularly some metaphyseal fractures at the distal medial portion of both tibias. They had the classic appearance of a corner fracture, which is typically [characteristic of] child abuse." N.T., 9/30/19, at 218. However, he stated, "one of the fragments was large enough that I was unclear whether or not it was a new fracture or . . . an ossification variance. .

. ."<sup>14</sup> **Id.** Dr. Kuivila stated that based on subsequent x-ray films, the area had "healed with the ends of the tibia, implying that they had indeed been fractures and . . . not simply an ossification variance." **Id.** at 218-19.

Nevertheless, Dr. Kuivila testified, "The size of that piece, though, struck me in that [it] just seemed larger than what you would typically see[,] which made me start to think that perhaps the bone itself was not as strong[,] and that perhaps those pieces of bone, while corner fractures, may not have been caused by the violent sort of energy that typically would cause [corner] fractures." **Id.** at 219. He explained, "based on the gravity of the charges [filed against Parents], it made sense to completely evaluate [Child] for an underlying bone disorder. . . ." **Id.** Dr. Kuivila stated that he focused on evaluating Child for osteogenesis imperfecta because it is "one of the most common [disorders] for bone fragility. . . ." **Id.**

Further, Dr. Kuivila testified that Child's "whites of his eyes had a bit of a bluish tint" that had persisted up to and including his last examination of Child, which occurred on the Friday before the subject proceeding. **Id.** at 225. Dr. Kuivila agreed with Dr. Eichman that, "having a bit of a bluish tint to the sclera doesn't necessarily mean they have [osteogenesis imperfecta]." **Id.** at 226.

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<sup>14</sup> As best we can discern, Dr. Kuivila defined "ossification variance" as "Sometimes early on a lot of bones coalesce from several foci o[r] prebone . . . sometimes they don't all merge early on. . . ." N.T., 9/30/19, at 218.

In addition, Dr. Kuivila testified that Child's "overall head shape may have been consistent with what we call elfin facies. . . . If you have just a little bit more of [a] pointy chin . . . it's a physical finding. It is not, again, pathognomonic for a bone disorder, but it is seen in such bone disorders, and so that was just another micro clue that led me to suspect that this might not be non-accidental trauma and that it might have an underlying cause." N.T., 9/30/19, at 225. In contrast, Dr. Eichman testified that she did not record anything about Child's face shape in her physical examination of him. *Id.* at 88-89. Dr. Eichman did not testify that she observed elfin facies in Child.

Dr. Kuivila stated that at his second appointment with Child on August 13, 2019, new x-rays taken that day "did show healing of the previous . . . areas which is what in my mind cleared up whether or not this was a variant of the bone formation. It clearly was not." *Id.* at 226. However, he testified that the x-rays "were read as perhaps some cupping of the metaphyses of the, particularly the distal ulna of the wrist,<sup>[15]</sup> and I thought that[,] and the radiologist thought that, and that can again be a sign of some ossification irregularities, and so that just made it in my mind more important that we further evaluate the bone quality." *Id.* at 227. Therefore, he referred Child to a pediatric endocrinologist whom he testified "subsequently did order some real basic screening DNA sequencing." *Id.*

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<sup>15</sup> There is no dispute that Child's right wrist, although bruised when he presented at CHP on June 20, 2019, was not fractured.

Dr. Kuivila testified that the endocrinologist ordered genetic testing for “an [osteogenesis imperfecta] core panel which just looks at two . . . of the genes, the COL1A1 and the COL1A2. . . .” **Id.** at 228. He stated that the report “came back as negative for a mutation within the COL1A1 and 1A2 gene[s].” **Id.** Dr. Kuivila testified, “90 percent of osteogenesis imperfecta is a result of a COL1A1 and 1A2 disorder.” **Id.** at 229.

In addition, Dr. Kuivila testified on cross-examination by CYS:

Q. And to be clear –

. . .

Q. -- all of the secondary testing that you’ve done to date has been normal; correct?

A. Yes. The genetic testing was normal, and the metabolic panels have some subtleties, but nothing that was pathognomonic for an underlying metabolic disorder. For example, the magnesium was a little bit high but not ridiculously high, and the [Vitamin] D was slightly above, just slightly above the normal range.

. . .

But nothing, nothing in the calcium or the phosphorus that was abnormal, correct.

**Id.** at 253-54.

Nevertheless, Dr. Kuivila testified that he “can’t rule out either” a “metabolic bone disease” or “non[-]accidental trauma” as the cause of Child’s fractures “until all the data is in.” **Id.** at 246, 249. He stated, “I don’t think there should be a ruling of non[-]accidental trauma given the other clinical findings, *i.e.*, blue sclera and elfin facies, until complete genetic testing is

performed. We didn't have . . . genetic testing 20 years ago, so it couldn't be done, but now that we have it, it should be done." **Id.** at 263.

Dr. Kuivila testified that there is a more conclusive genetic test called "a combined dominant and receptive [osteogenesis imperfecta] panel." **Id.** at 228. He explained, "Rather than testing for the two genes, it tests for about 25 different ones which would then encompass a number of both mineral density abnormalities, and another ten types of osteogenesis imperfecta, . . . certain sorts of genetic osteoporosis, and a couple other things." **Id.** Dr. Kuivila stated, "10 percent of these varied disorders are not affirmed by the" osteogenesis imperfecta core panel that was tested on Child. **Id.** at 229. As such, he testified on cross-examination by the GAL that, if 20,000 to 50,000 people suffer from osteogenesis imperfecta, between 2,000 to 5,000 people would have a type of the condition that could not be detected by the genetic testing done on Child. **Id.** at 258-59. Dr. Kuivila explained, "DNA testing is an affirmation test. . . . [I]n other words, if you're positive for it, you've got it, but a negative value or a null value can be, there's still a . . . what we call false negative." **Id.** at 229.

Based on the foregoing, we cannot conclude that the juvenile court abused its discretion in determining that "credible evidence was clear and convincing . . . that Child was abused. Dr. Eichman and Dr. Moore both testified to a reasonable degree of medical certainty that the injuries suffered by Child were the result of non-accidental trauma and indicative of child

abuse.” Trial Court Opinion, 12/24/19, at 24. Our review reveals that Dr. Eichman and Dr. Moore testified unequivocally in this regard, based on Child’s clinical presentation, which was unexplained by Parents, including his multiple bruises in different locations, his metaphyseal fractures in his legs, and his rib fractures. In addition, Child’s laboratory testing for a bleeding disorder and metabolic bone disease were normal. Dr. Moore also testified that Child’s x-rays showed no evidence of metabolic bone disease, and the x-rays showed that Child’s fractures were healing normally.

Accordingly, we discern no abuse of discretion by the court in finding Dr. Kuivila’s testimony unpersuasive insofar as he did not review all of the photographs of Child’s bruises present on June 20, 2019; he had no explanation for the bruise on Child’s right wrist; he agreed that Child suffered metaphyseal fractures; secondary laboratory testing he ordered of Child for metabolic bone disease was negative; and Child’s genetic testing for osteogenesis imperfecta was negative. With respect to Dr. Kuivila’s testimony that osteogenesis imperfecta cannot be ruled out because Child did not undergo a more conclusive test, we discern no abuse of discretion by the court in finding that (1) the endocrinologist who was consulted by Parents ordered appropriate tests for that condition; (2) no further tests were ordered by the endocrinologist; and (3) Parents failed to pursue any further genetic testing for osteogenesis imperfecta. Trial Court Opinion, 12/24/19, at ¶¶ 22, 29.

Also, Dr. Kuivila testified that the blue sclera and elfin facies he observed in Child is not determinative of osteogenesis imperfecta.

In sum, we discern no abuse of discretion by the juvenile court's credibility determinations and factual findings, upon which the court relied in concluding that Child was the victim of child abuse as defined by 23 Pa.C.S.A. § 6303(b.1), and dependent pursuant to 42 Pa.C.S.A. § 6302.

Order affirmed.

Judgment Entered.

A handwritten signature in black ink, reading "Joseph D. Seletyn", written over a horizontal line.

Joseph D. Seletyn, Esq.  
Prothonotary

Date: 6/9/2020