QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INVESTIGATION

CITATION:	Non-inquest findings into the death of Daniella Duchatel
TITLE OF COURT:	Coroners Court
JURISDICTION:	Brisbane
DATE:	20 January 2026
FILE NO(s):	2023/2445
FINDINGS OF:	Coroner Megan Fairweather
CATCHWORDS:	Coroners: health care related death – management and prevention of venous thromboembolism – lower leg injury – Royal Brisbane and Women's Hospital

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Introduction

1. On 15 April 2023, 26 year old Daniella was enjoying a night out with friends when she had a fall, seriously injuring her left leg. She was taken by ambulance to Royal Brisbane and Women's Hospital where she was diagnosed with a fractured left shinbone. The fracture was treated surgically on 3 May 2023. Almost three weeks later, Daniella collapsed suddenly at home. Despite every effort to save her life, she passed away in the early hours of 22 May 2023.

2. Daniella's death was reported to the Coroners Court of Queensland for investigation as a health care related death under the *Coroners Act 2003*. The purpose of a coronial investigation is to establish certain facts where possible. Namely, the identity of the person who died, when and where they died, how they died, and their cause of death. It is not a Coroner's role to cast blame or determine criminal or civil liability. A coronial investigation can also examine systemic failures contributing to a death and consider whether these have been identified, with appropriate improvement actions to prevent future similar deaths.

3. There are clear answers to Daniella's identity, and when and where she died. A forensic pathologist advised the cause of her death was pulmonary embolism, where blood clots from the deep veins of her injured leg broke away, causing fatal obstruction in her lungs. The circumstances of how Daniella died were subject to further coronial investigation by reference to the following questions:

    a. What written standards or guidelines support the clinical management of venous thromboembolism (VTE) risks for patients with lower leg injuries?

    b. How were Daniella's VTE risks assessed and managed, and were her risk assessments and prevention plans consistent with Queensland Health or other clinically accepted guidelines or practices?

    c. Were there departures from Daniella's VTE risk prevention plans?

    d. Would any different VTE risk assessment and prevention planning have altered the outcome for Daniella?

    e. Was the Queensland Ambulance Service response to Daniella's deterioration timely and appropriate?

    f. Have Metro North Hospital and Health Service and/or Queensland Ambulance Service identified relevant systemic gaps and made appropriate improvements to help prevent future deaths occurring in similar situations?

4. In reaching my findings, I have considered Daniella's clinical records, statements from her treating clinicians, expert opinion from an independent cardiologist, clinical review by Metro North Hospital and Health Service, and the health service's responses to Daniella's family's concerns and the expert report. I have also reviewed information and a review from Queensland Ambulance Service.

Executive summary

5. At the time of treating Daniella, statewide Queensland Health Guideline for preventing deep vein thrombosis risks were endorsed for use at Royal Brisbane and Women's Hospital, and available on the intranet, but not adapted to fit with local processes. The QH Guideline interactive VTE risk assessment tool was separately available on the emergency centre SharePoint, but not widely used.[1]

6. There is no evidence Daniella was assessed at any time for her individual VTE risks by doctors at the Royal Brisbane and Women's Hospital.

7. Daniella's individual risk factors for VTE included obesity (BMI >30), smoking vapes, oral contraception, leg injury requiring surgery of more than one hour duration, and prolonged immobility with her leg effectively immobilised in a splint. These risks were present from the time of her first presentation to the emergency trauma centre overnight on 16 April 2023. The QH Guideline would strongly recommend blood thinning medication with this risk profile.

8. The only VTE prevention plan advised for Daniella, before her surgery, was through a physiotherapist review in the emergency department on 16 April 2023. A physiotherapist advised her to do foot exercises while the knee was partially immobilised in a Richard splint, designed to allow ankle movement to help blood flow with exercise. There was however no targeted assessment about her likely motivation or capacity to exercise, and no targeted deep vein thrombosis prevention plan, including to consider prophylaxis blood thinning medication by the doctors responsible for her management before her surgery on 3 May 2023.

9. I accept the clinical expert's opinion that blood clots would have been forming in the deep veins of Daniella's left leg from the time of injury, 17 days before her surgery, and this required an immediate assessment of her specific risks by her doctors, with a written plan for VTE prevention. While movement and exercise are key for VTE prevention, QH Guidelines and the clinical expert opinion advise blood thinning medication was clearly indicated for Daniella, but not offered.

10. A VTE prevention plan was made after the surgery on 3 May 2023, with orders for compression stockings and a mechanical device while in hospital and a further physiotherapy review with education about exercises, mobility and movement while the leg was in an extension splint. Blood thinning medication was also to be given in hospital, and to be taken at home for a further four weeks. I accept the clinical expert's opinion this was overall an appropriate plan noting there are differences in clinical practice as to the type of blood thinning agents prescribed.

11. For reasons that cannot be resolved by this investigation, Daniella stopped taking blood thinning medication three days before her death. The extent of Daniella's compliance with her foot and ankle exercises cannot be assessed. There was evidence Daniella had been in bed since discharge from hospital and had only tried to mobilise for the first time on the day of her collapse. This has been clarified by her family as being incorrect. There is however no evidence Daniella was educated specifically about the exercises and mobility being critical to help prevent breakaway clots causing a fatal lung obstruction.

[1] It was submitted by Royal Brisbane and Women's Hospital that the emergency trauma centre staff found the interactive risk assessment tool difficult to use.

12. I accept the clinical expert's opinion that Daniella's death would likely have been prevented if her individual VTE risks had been assessed, identified and documented in a prevention plan, that included education from her doctors (including about the importance of exercises and the risk of death), an assessment of her capacity and likely motivation for compliance, as well as to prescribe prophylactic blood thinning medication, from the time of her first presentation on 16 April 2023 to be continued for the four weeks after surgery.

13. The Queensland Ambulance Service response to Daniella's emergency deterioration was timely and appropriate.

14. The retrospective review by Metro North Hospital and Health Service has resulted in substantial changes to help prevent future deaths occurring in similar situations, including to adapt for local use the QH Guideline for preventing VTE in hospitalised patients, and to create simple and impactful "Stop the Clot" factsheets and video resources for clinician and patient education, and to promote consistency for VTE management across Metro North Health facilities.

15. While initially the hospital review team did not consider any healthcare related factors contributed to Daniella's death, later responses conceded that more ought to have been done to assess her individual risk factors and to create a written plan to help prevent her VTE risks. The responses concede blood thinning medication was indicated from the time of her first presentation on 16 April 2023.

16. Venous thromboembolism is a well known cause of preventable harm in hospital settings. Risk assessments for VTE are essential to identify patients who might be at increased risk of developing blood clots following an injury, during or after a hospital stay, or who are likely to experience periods of reduced mobility. Of course, any risk assessment requires a counterbalancing assessment of the patient's risk of bleeding that might be exacerbated by blood thinning agents.

17. There are clear public interest reasons to publish these findings to share the importance of individual VTE risk assessment and prevention planning with the medical community, and to highlight the importance of patient education and the VTE decision tools available for use within the Queensland Health environment.

The events leading to Daniella's death

18. Daniella arrived at Royal Brisbane and Women's Hospital emergency department late on 15 April 2023 and was diagnosed in the early hours of 16 April 2023 with a left shinbone fracture. She was referred for an appointment in the outpatient orthopaedic fracture clinic, within the week, on 21 April 2023.

19. Before going home, her left leg was placed in a Richard splint. This is a brace to keep the knee immobilised, from mid-thigh to mid-calf, fixed in place using velcro straps, in preference to a plaster "back slab" cast. A physiotherapist gave advice about using crutches and Daniella's mother recalls advice about the importance of not placing any weight load through the left leg, to keep the left leg elevated, to wriggle the foot regularly, and to do exercises for the right leg and arms.

20. On 21 April 2023, Daniella attended her fracture clinic appointment. The orthopaedic doctor made findings of swelling in the left knee and ankle, the type of splint being used, and the type of fracture (closed with nerve and blood vessel injury). A surgical procedure was recommended with fixation using a metal plate.

21. The paperwork for surgery included a “Generic Consent Adult” form, completed with the orthopaedic doctor, and a “Patient Risk Assessment” form, completed with a registered nurse. I will come back to these forms.

22. On 3 May 2023, Daniella attended for her surgery. The procedure went for ninety minutes without complication. The post operative orders to help prevent deep vein thrombosis included compression stockings, a mechanical device, and blood thinning medication, clexane, while in hospital, to be followed by four weeks of a different blood thinning medication, aspirin, at home. Daniella’s mother recalls the compression stocking and device were used only on the right leg in hospital. She recalls being told they could not go over the left leg surgical area and were not needed. A dose of clexane was recorded after surgery on 3 May 2023.

23. On 4 May 2023, Daniella was seen by a doctor before her discharge from hospital. The doctor recorded giving advice to ‘touch’ weight bear only for the next six weeks. A physiotherapist also saw her before discharge and gave advice, in accordance with the plan made by the orthopaedic surgeons, about using an extension splint for two weeks and then to graduate to a brace allowing a progressively increasing range of movement at the knee. The physiotherapist documented advice about using crutches and doing leg and ankle exercises.

24. Daniella was discharged from hospital on 4 May 2023 with a prescription for 28 days of aspirin. She was to return in two weeks for wound checks, and in six weeks for review with the orthopaedic doctors. There is no record to confirm the clexane was given on the day of her discharge from hospital.

25. On 18 May 2023, Daniella attended for her two week checkup appointment. The wound was healing and nerve assessment was normal. The plan was confirmed to remove stiches and graduate to a brace with progressively increasing range of movement in the leg and return in four weeks. Daniella’s mother alleges the doctor advised Daniella she did not need to keep taking the aspirin. There was no record of this conversation in the clinical notes. I will also return to this issue.

26. Three days later, on 21 May 2023, at around 9.00pm, Daniella collapsed on her bed while playing cards with her parents. Her father called emergency services. Daniella was reportedly unconscious. She was breathing initially, but at times this stopped with her mother needing to perform cardiopulmonary resuscitation.

27. Queensland Ambulance Service paramedics attended within 16 minutes to take over the resuscitation. A cardiac ultrasound showed signs of pulmonary embolism. Paramedics recorded a history that Daniella had not been out of bed since leaving hospital and had been practically immobile for more than two weeks. They documented being told Daniella had attempted to mobilise for the first time that day. This evidence has since been clarified by Daniella’s family who advised she was assisted to get out of bed every day. She worked from home, sitting in the lounge room, with her leg elevated. Her family advised she completed her exercises at regular intervals. The only day she was in bed longer than usual was the day of these events. She had not been feeling well. Daniella was given thrombolytic therapy and transported to The Prince Charles Hospital. Despite the best efforts of all emergency responders, Daniella did not show any signs of recovery. She tragically passed away at 1.01am on 22 May 2023.

What written standards or guidelines support the clinical management of deep vein clotting risks for patients with lower leg injuries?

28. In 2018, Queensland Health published a guideline for patient risks of venous thromboembolism: "*Guideline for the Prevention of Venous Thromboembolism in Adult Hospitalised Patients*" (QH Guideline).

29. The QH Guideline is aimed at preventing VTE in adults admitted to hospital or who, as here, have injury with temporary lower leg immobilisation. It captures patients who are discharged from emergency departments, but it does not apply for patients attending outpatient clinics.[2]

30. It is important to mention these are guidelines. They are not mandatory. Doctors retain an important discretion to use clinical judgment for each patient's individual situation. As often happens in medical practice, there can be areas of accepted variance between medical practitioners. However, guidelines are a way for complex heathcare systems, such as Queensland Health, to set consistent expectations for its workforce to promote patient safety and quality of care.

31. It is also important to mention that the QH Guideline does not guarantee that recommended VTE risk management pathways will prevent deep vein thrombosis. There remains an inherent risk of developing clots in the deep veins for people with certain health and lifestyle conditions, with certain injuries, and with surgery. Whatever their cause, there is always a risk that clots will break away and cause a fatal lung obstruction. Prevention plans help to reduce the risk, but they cannot be guaranteed to work in all cases.

32. The QH Guideline incorporates an interactive online tool: "*Adult Venous Thromboembolism Risk Assessment Tool*". The tool allows clinicians to input data about individual risk factors and an algorithm will produce advice about the person's risk profile with a recommended prevention plan. This tool was available on the statewide Queensland Health intranet, and in the emergency trauma centre SharePoint, but was not used for Daniella's admission.

33. The application of the QH Guideline for Daniella's deep vein clotting risk factors are discussed later in these findings. It is enough to say here that typical measures to help prevent clots, depending on a patient's unique risk profile, include prophylaxis blood thinning medication, advice and education about movement and exercise, compression stockings, mechanical devices, and medical equipment designed to promote movement and mobility.

34. The QH Guideline is consistent with guidance published by the Australian Commission of Safety and Quality in Health Care, VTE Prevention Clinical Care Standard which promotes procedures for individual patient VTE risk assessments and for making a documented prevention plan, including with patient education.

How were Daniella's risks of developing deep vein clots assessed and managed before her surgery?

35. There is no evidence Daniella's deep vein clotting risks were assessed or identified by doctors in the emergency department overnight on 16 April 2023.

[2] I take this to mean the QH Guideline excludes patients attending only for outpatient appointments, rather than patients in Daniella's situation attending across a continuum of care – such as here starting in the emergency department, referred to outpatients to plan surgery, then a hospital admission for surgery, and follow up monitoring back in the outpatients setting. This is not specifically mentioned.

There was a plan made with the oncall orthopaedic doctor to ensure she had a physiotherapy review, which was expected to, and did, discuss movement and exercise. This was the only measure taken for VTE prevention before surgery.

36. The overnight junior doctor in the emergency department made a detailed note about the assessment for Daniella. He provided a statement detailing the history taken which, by his standard practice, would have been to ask about Daniella's regular medications, alcohol intake, illicit drug use, smoking or vaping habits, and family history. As he did not record oral contraceptives, it is possible this was not mentioned. Daniella's presentation was discussed with a more senior doctor and also with the oncall orthopaedic doctor. The junior doctor followed the advice of the orthopaedic doctor to apply a bandage and a Richard splint, supply crutches, request a physiotherapist mobility review, and to arrange an appointment with the orthopaedic fracture clinic. The junior doctor's shift ended some hours before Daniella was discharged, and he was not involved in planning discharge advice.

37. The oncall orthopaedic doctor provided a statement to confirm the advice he gave to the emergency department doctor. It was not usual practice to discuss risks of venous thromboembolism in calls like this. The practice was to ensure review by a physiotherapist who would usually assess mobility and provide education and advice about venous thromboembolism prevention and exercises.

38. The physiotherapist documented advice given for Daniella to keep her leg elevated and wriggle her toes in the splint. It is not documented as such, but presumably this was a method of clot prevention by regular movement of the leg.

39. At the fracture clinic appointment on 21 April 2023, a "Patient Risk Assessment" was completed in preparation for the planned hospital admission. It is normal procedure for a registered nurse to complete this form. The form has four pages of potential patient risk factors to discuss. On the second page, there is a section dedicated to identifying a person's risk of developing venous thromboembolism. The registered nurse ticked the box that indicated Daniella's risk of developing deep vein clots was: *"No to all = not at risk".* This was despite prompts on the form to consider, as were relevant for Daniella, major joint surgery, obesity (BMI >30), leg injury requiring surgery of greater than 60 minutes duration, use of oral contraception, and the likelihood of prolonged immobility after the procedure.

40. The registered nurse provided a statement to explain it is not her role or scope of practice to recommend prevention measures for VTE risks. The registered nurse acknowledged she did not complete the risk assessment form adequately. The registered nurse has reflected and improved her practice with further education about pulmonary embolism and now ensures that nursing care documents are completed thoroughly. This was a missed opportunity to bring Daniella's VTE risk profile to the attention of the orthopaedic surgeons, if they did in fact (or routinely did) review the nursing assessment.

41. A "Generic Consent Adult" form was also completed, as is also standard practice, by the junior orthopaedic doctor at the fracture clinic appointment. The consent form guides conversations with patients about risks of their surgical procedures. The generic form noted a surgical risk of blood clots forming and breaking off and going to the lungs. There is however no record of a discussion with Daniella to indicate her specific risks had been identified for prevention management.

42. The senior orthopaedic surgeon who saw Daniella in the fracture clinic considered her fracture was stable and suitable for the Richard splint before her surgery. He inspected the splint and reviewed the knee. He recalled there was

swelling but this was expected, and it was appropriate to proceed with surgery. No specific deep vein risks were brought to his attention, but he had noted Daniella's BMI was around 30 which possibly indicated an increased risk.

43. The senior orthopaedic surgeon did not think any medication prevention was needed for Daniella between her fracture clinic appointment and her surgery, which was scheduled within 14 days. He considered Daniella was low risk for prevention medication, as she was ambulatory and had a removable knee splint with free ankle motion. He considered that as she was not immobilised by a cast or backslab, she would not be for VTE prophylaxis under the QH Guideline.

44. An independent expert cardiologist engaged to advise about Daniella's VTE management noted that written evidence of Daniella's risks of VTE in her clinical records was "very patchy or not present at all" for her presentations to the Royal Brisbane and Women's Hospital emergency department and at the fracture clinic.

45. The independent clinical expert confirmed Daniella's specific risk factors were obesity, oral contraceptive, and vaping, in addition to her acute lower leg injury. The clinical expert also observed another important risk factor, not easily quantified, which involves assessment of the patient's determination, attitude, and ability to follow advice about mobilising early and reducing their risks. Some patients with lower limb injuries try as much as possible to get on with their lives. Others tend to become house or bed bound. It appeared Daniella was in the latter category and was less mobile than anticipated by her medical teams.[3]

46. The clinical expert was concerned that a Richard splint provides little opportunity for the ankle to move and help pump the calf muscle. As Daniella was not weightbearing, her leg would have been effectively immobile. Taken together with her risk factors, blood thinning medication should have been recommended from the time of her first attendance. The QH Guidelines[4] suggests Daniella, with her known risk factors and acute severe fracture, should have been strongly considered for low molecular weight heparin (e.g. enoxaparin such as clexane).

47. I accept evidence from treating doctors that a Richard splint does allow ankle and foot movement. The QH Guideline advises blood thinning medication is "strongly indicated" for an immobilised lower leg "in a backslab or cast". The treating doctors stated a Richard Splint was not in this category. This interpretation is too narrow.[5] The use of a Richard splint meant Daniella's leg was effectively to be kept immobile and straight, noting there was no assessment about motivation to complete ankle exercises. I find the independent clinical expert's criticisms about Daniella having an inadequate VTE risk assessment with this splint are valid.

48. The clinical expert also noted a further missed opportunity to consider Daniella's VTE risk at the clinic on 21 April 2023. The record of ankle swelling might have triggered investigation such as doppler ultrasound. The expert noted if deep vein thrombosis was identified, it would have prompted prescribing of anticoagulation

[3] Although, as noted, her family have clarified she was attempting to comply with her physiotherapy exercises every day while sitting out of bed in a chair.
[4] Section 2.2.5, for ambulatory patients with isolated lower limb immobilisation, Table 20.
[5] The statements were made from a retrospective application of the QH Guideline to Daniella's case. The point being made was the QH Guideline only recommended chemical prophylaxis for other types of immobilisation, not a Richard splint. This is discussed further in paragraph 79. Royal Brisbane and Women's Hospital has submitted the QH Guideline "*was an important piece of work, but one that proved challenging to apply in day-to-day practice*" at the time of Daniella's care.

medication. I accept this is hypothetical. The orthopaedic team statements say swelling was in the expected range and ultrasound was not indicated at this time.

How were Daniella's risks of developing deep vein clots assessed and managed after her surgery?

49. The senior orthopaedic surgeon was present to supervise Daniella's surgery on 3 May 2023 which lasted about 90 minutes. The senior orthopaedic surgeon advised there was mild to moderate swelling around the knee, but it was considered safe to proceed. Daniella had reported falling in the shower the previous evening, but this had not resulted in displacement of the fracture or significant further swelling. He did not observe or document any swelling at the ankle or calf to signal a significant deep vein thrombosis was present at this time.

50. The orthopaedic surgeon who performed the surgery stated that, although he did not complete a tool based VTE assessment, he assessed Daniella was at risk due to the combination of having a lower-limb fracture, and now having had lower-limb surgery, with an altered normal range of motion and weight bearing. This is a frequent combination of factors in orthopaedic trauma surgery and standard VTE prevention orders were made for compression stockings, mechanical device, and daily administration of clexane while she was in hospital, followed by four weeks of aspirin at home. Daniella was also to be advised to toe-touch weight bear for six weeks: two weeks initially in an extension splint, followed by a brace with progressively increasing movement settings.

51. The physiotherapist who saw Daniella in preparation for her discharge made a very detailed note that followed the surgical orders with advice about mobilising, exercises to keep the leg and ankle moving, and the plan for progressively moving to a brace that allowed more movement with the knee after two weeks.

52. I accept the clinical expert's opinion that the prevention plans from this point were appropriate for Daniella's risks (although not specifically addressed as such) and were generally consistent with the QH Guideline and other tools used by the clinical expert. That is, save there was no evidence of a subjective assessment about her likely motivation for compliance with exercises and general mobility, and to ensure clear education was given about the risks of not complying with VTE prevention, including the risk of death from pulmonary embolism.

53. Once Daniella attended for surgery on 3 May 2023, the clinical expert would have recommended compression stockings on both legs and low dose heparin or low molecular weight heparin (e.g. clexane). The clinical expert emphasised the choice of anticoagulation was a decision for the surgical team, and aspirin is recommended by many orthopaedic surgeons. The clinical expert's primary concern was the failure to account for all risk factors for Daniella, including the prospect for significantly reduced mobility which placed her at higher risk. If that had been done, the preferred choice likely would have been low molecular weight heparin therapy. I have considered the statements from Daniella's treating doctors that aspirin was an appropriate agent for VTE prophylaxis, then used widely in orthopaedic surgical practice. I also acknowledge there seems to be an emerging preference for low molecular weight heparin therapy (e.g. clexane).

54. The clinical expert also suggested that leg swelling at the time of surgery may have been a sign that deep vein thrombosis was present at this time. It was advised if a doppler ultrasound had been done it might have identified thrombus and, on the balance of probabilities, would have resulted in different treatment and the outcome of Daniella's death in all likelihood avoided. Again, I accept this

opinion is hypothetical and the orthopaedic team have stated there was no unexpected swelling that might have triggered a doppler ultrasound to check for VTE or to offer alternative treatment to resolve any clots found at this time.

55. The senior orthopaedic surgeon also noted that, at the two week review after the surgery, Daniella's brace was changed to allow more range of movement, up to 30 degrees, before moving to 60 degrees. The family's concerns about swelling in the leg were attributed to the normal consequences of injury surgery. The orthopaedic doctor who saw her at this review stated that swelling is a common complaint. It can persist for two years in some patients and the correlation between swelling and a diagnosis of a deep vein thrombosis is poor. There is no single sign or symptom that can be used to predict the presence of VTE.

56. The senior orthopaedic surgeon also stated he was not made aware of concerns with lower leg swelling after this review although it would be a common finding. If disproportionate ankle and calf swelling had been a concern, an ultrasound doppler might have been arranged. If an ultrasound had been indicated, he conceded the overall clot burden might have been identified and addressed.

Were there departures from Daniella's VTE risk prevention plans?

Adherence to prophylaxis blood thinning medication

57. In relation to the issue of whether clexane was given on the day of Daniella's discharge, on 4 May 2023, the clinical expert observed either it was given and not recorded, or it was not given. Even if not given, the clinical expert would not consider the omission of one dose to have any significant impact on her outcome.

58. A different orthopaedic doctor saw Daniella at her two week review on 18 May 2023. This doctor made the notes in the clinical record and provided a statement to advise this was his only involvement in her care. The orthopaedic doctor was in his sixth year in the orthopaedic team. He stated there could be 30 to 50 post operative reviews each week, in addition to other duties. The notes show his impression was of a well healing wound with no signs of infection. The nerves were intact. The plan was to remove stiches and apply a range of movement brace, locked at 0-30 degrees, with further review planned in four more weeks.

59. Although not documented, the orthopaedic doctor stated he would have reviewed the post operative orders and would have considered deep vein clot prevention and adherence at this appointment with Daniella. He would have been aware of the plan for aspirin to be taken for four weeks after surgery. After noting that variance in practice is contemplated by the QH Guideline, and his own preference to use low molecular weight heparin (e.g. clexane), he stated aspirin was a proven agent for deep vein clot prevention. Whichever medication is preferred, it is standard to prescribe prophylaxis for four to six weeks after knee surgery.

60. Daniella's mother alleges Daniella was told she could cease taking aspirin at this appointment. There was nothing to this effect recorded in the notes. After working for six years in the orthopaedic department, and seeing the devastating effects of thromboembolism, the orthopaedic doctor could not imagine ever suggesting that clot prevention medication be ceased two weeks after surgery.

61. I am unable to make a positive finding about whether Daniella was told she could cease taking aspirin as stated by her family, other than to infer from her mother's evidence it was in fact ceased after two of the four weeks, from 18 May 2023.

62. The senior orthopaedic surgeon stated he expected the aspirin would be taken for the full four weeks. If aspirin was not taken after 18 May 2023, this may have contributed to the formation of additional clots. Clots are continuously being formed and broken down in the body. The autopsy only examined Daniella's legs below the knees and estimated the clots identified were between two weeks to one month in age. The clinical expert advised that aspirin can be effective for seven to ten days for managing existing clots, but not new clots.

63. The senior orthopaedic surgeon and the clinical expert both noted below knee clots rarely break away to cause fatal pulmonary embolism. The breakaway clots were likely small, but Daniella may not have been able to overcome this given her then unknown coronary artery disease with 70% occlusion of one of her arteries.

Adherence to movement and mobility

64. The senior orthopaedic surgeon confirmed that early mobility is a key measure in any prevention plan to minimise a patient's VTE risk. The reason for touch toe weight bearing is to promote contraction in the calf muscle. Studies show VTE risk is lowered when using a knee splint or brace rather than a cast or back slab.

65. Daniella's family recall she was told not to weight bear but she could rest her foot on the floor and to continue with wriggling her foot and moving her leg as allowed by the brace. The extent to which Daniella complied with the advice she received from her physiotherapy reviews on 16 April 2023 and 4 May 2023 is not known, save that her family have since advised that she was assisted out of bed each day and, while sitting with her leg elevated, was frequently completing exercises.

66. Daniella's family clarified it was not the case she had only tried to mobilise for the first time on the day of her collapse as recorded by paramedics. She had been in bed more than usual that day due to feeling unwell. She lived in a property with stairs[6], but there is insufficient evidence to find she was properly educated about the purpose for her exercises and the very significant risks of not complying.

Would any different VTE risk assessment and prevention planning have altered the outcome for Daniella?

67. The clinical expert reiterated that Daniella was not assessed holistically for her motivation and ability to mobilise and perform the exercises in her foot and ankle as much as possible from the time of her injury. She was not prescribed anticoagulation medication despite recommendations in the QH Guideline for someone whose lower limb was effectively immobilised before surgery, together with her other specific risk factors of obesity, oral contraceptive, and vaping.

68. The Royal Brisbane and Women's Hospital, as outlined below, submitted that a Richard splint does allow more movement, but effectively conceded it would be a narrow application of the QH Guideline to say that blood thinning medication was only advised for back slab casts. The Richard splint was designed to keep the knee immobile and there were several other risk factors present for Daniella.

69. I accept the clinical expert opinion that Daniella's death was in all likelihood preventable if she had been prescribed blood thinning medication, which was indicated for her specific risk profile, in accordance with the QH Guideline, from

[6] I accept submissions on behalf of the physiotherapists that a stair assessment did form part of their safe mobility planning with Daniella on 16 April 2023 and 4 May 2023.

the time of her first attendance in emergency overnight on 16 April 2023, or at least in the fracture clinic when seen by orthopaedic surgeons on 21 April 2023.

70. The cessation of aspirin (three) days before death likely also played a significant role according to the clinical expert. The clinical expert noted thrombus was likely present shortly after the injury and would have slowly progressed in size. The expert advised that thrombus can form within minutes to hours, in order to form clots that can break away and cause a fatality. Daniella may well have had thrombus in her calf before her operation on 3 May 2023. The use of aspirin consistently after discharge would have potentially reduced the growth rate of any new thrombus that may have formed a break away clot to cause the fatal event.

Responses to the independent clinical expert's opinion

71. The Royal Brisbane and Women's Hospital responded to the clinical expert's report, through the Deputy Director of Haematology and the Director of Orthopaedic Surgery. In combination, the responses acknowledge that Daniella's VTE risks were not assessed or identified, and this impacted her management from the start. They conceded Daniella should have been prescribed blood thinning medication at her first presentation and educated fully about her risks.

72. The responses did not agree with the clinical expert's observations about the limitations of the Richard splint and pointed to objective evidence that the risk of developing clots is less with this device than a backslab or rigid cast on the leg. The Richard splint allows the movement of the ankle which is the critical action to pump the calf. It can be removed to facilitate the recommended exercises. It was acknowledged that the effectiveness of ankle and foot movement as a prevention measure is dependent on patient education, capacity and motivation.

73. Daniella was seen by a physiotherapist in the emergency centre on 16 April 2023 but there is no specific note there was education for bed circulation exercises or education about management of the Richard splint. She was educated to mobilise. The physiotherapists on 4 May 2023 made clear notes about circulation and leg exercises. It was not recorded the purpose was to help prevent clots.

Review by Royal Brisbane and Women's Hospital

74. The Royal Brisbane and Women's Hospital conducted a Clinical Incident Analysis review into Daniella's care and treatment. Notably, the review team did not find any healthcare factors directly contributing to Daniella's death. Plainly, this finding cannot be accepted. The review acknowledged deep vein thromboses carry inherent risks of breaking away causing pulmonary embolism and death.

75. The review team recommended that the Director of Emergency and Trauma Centre and the Director of Orthopaedic Surgery at Royal Brisbane and Women's Hospital, review current processes around the application and documentation of the QH Guideline for all patients presenting to the emergency department and the orthopaedic fracture clinic with traumatic orthopaedic related injuries. This review was to be finalised by the end of 2024, to include following features:

    a. A clear definition and clarification of what constitutes lower limb immobilisation and rigid immobilisation.

    b. Articulate the differences between a below knee rigid cast and a semirigid knee splint, and therefore the VTE prophylaxis requirements.

c. Provide information and guidance about specific considerations for primary prophylaxis.

d. Emphasise the 'encourage mobilisation' section in the ambulatory and orthopaedic sections of the guideline.

e. Take account of any delay to surgery and incorporate reassessment of VTE risk in line with the recommendations in the QH Guideline (section for ambulatory patients discharged from emergency department).

f. Provide information and education about VTE risks and risk reduction plan to be implemented, for each patient.

g. VTE risk assessment and reassessments are documented at the time, in a place that is easily accessible to all clinicians involved in the patient's care.

h. Feedback and relevant in-service training to be provided to staff in the emergency and trauma centre, orthopaedic fracture clinic and preadmission clinic, in relation to the outcomes of this review.

76. The expected outcome after implementing this recommendation was that all patients presenting to the emergency centre, the orthopaedic fracture clinic and preadmission clinic, potentially at risk of VTE, will receive a prevention plan, developed with the patient, that balances pre and post operative risks for thrombosis, against the risk and consequences of bleeding as an adverse effect of VTE prevention medicines. The plan will be documented in a place that is easily accessible to all clinicians.

77. The review team acknowledged Daniella should have had a VTE risk assessment at the time of her attendance to the emergency department on 16 April 2023. There should have been a discussion about her individual VTE risk, and risk mitigation strategies should have been planned, explained and documented.

78. The QH Guideline interactive online Adult Venous Thromboembolism Risk Assessment Tool was not used at Royal Brisbane and Women's Hospital for Daniella. Instead, as already outlined, a VTE risk assessment was included on the Patient Risk Assessment form completed with the registered nurse at the fracture clinic on 21 April 2023. There had not been a full review of this form since 2019. The review team also noted that other clinical areas of the hospital used different VTE risk assessment methods.

79. A retrospective assessment of Daniella's venous thromboembolism risk using the QH Guideline interactive tool was completed on the hypothetical basis that using a Richard splint meant the risk factor of being "t*emporarily immobilised with above or below knee cast or backslab*" would not apply. I agree with the review team this wording may lead to a misunderstanding, where strictly speaking the Richard splint is not as rigid as a cast or backslab. However, that distinction is unduly semantic and the intent would suggest this risk factor should be selected.[7]

80. The result of applying the online VTE tool in Daniella's case, at each time she attended (emergency department 16 April 2023, outpatient appointment on 21

[7] The review team noted there could be different interpretations of what was meant by lower limb 'immobilisation'. Daniella was placed in a Richards splint which immobilises the knee but does allow movement of the calf muscle and ankle. It is also removable. This is opposed to a rigid cast or other type of knee splints with the latter having less of a venous thromboembolism risk than a rigid cast. Once again, the submission about the QH Guideline being challenging for staff in day-to-day practice is noted.

April 2023, and surgery on 3 May 2023), would likely have considered her as having an isolated injury requiring temporary lower limb immobilisation. In addition, Daniella had other risk factors of BMI greater than 30, oral contraception and active smoker with vaping. In the absence of any identified bleeding risks or contraindications for blood thinning medication or other mechanical prophylaxis, Daniella would have been assessed at increased VTE risk. The outcome would have been to strongly consider VTE prophylaxis with a recommendation for prophylaxis blood thinning medication.

81. The review team acknowledged that the Patient Risk Assessment form completed by the registered nurse did not identify any VTE risk factors even though there were several applicable factors. That said, the review team was satisfied the nursing assessment did not impact on the clinical decision making for Daniella's VTE prevention plans. Daniella was offered standard orthopaedic surgical prevention with clexane and aspirin prescribed post-operatively.

82. The surgery consent form also noted specific risks of deep vein thrombosis and pulmonary embolism. The surgery consent form included information about the increased risk with obesity for thrombosis and blood clots in the leg that may break off and go to the lung. The review team conceded this appointment was another opportunity for VTE risk factors to be assessed for Daniella, despite outpatient settings not being included in the QH Guideline. I have already noted this would be a narrow application of the exclusion as Daniella was attending across a continuum in the health service that involved emergency care, pre and post surgery outpatient care and an inpatient admission for her surgery.

83. The lessons learned as a result of the review were as follows:

    a. First, to discuss potential gaps and to clarify potential ambiguities with certain descriptions in the QH Guideline (such as for immobilisation) and guidance about when prophylaxis should be considered. A plan was made to discuss these with the Statewide Anticoagulant Working Party.

    b. Second, to improve consistency of VTE risk assessment and prophylaxis guidance throughout Metro North Health. The QH Guideline (with its online risk assessment tool) was endorsed for use at Royal Brisbane and Women's Hospital in 2019 but had not been adapted to fit local processes. Two other Metro North Health facilities had created local VTE procedures, one with a VTE risk assessment tool. This was an opportunity to improve governance for consistent VTE risk assessment and prophylaxis guidance across Royal Brisbane and Women's Hospital and Metro North Health.[8]

    c. Third, to review the 'Patient Risk Assessment' form to ensure it was compliant with contemporary VTE risk assessment processes.

    d. Fourth, to improve education resources for consumers for VTE prophylaxis and risk reduction - for ambulatory, emergency medicine, inpatient and post discharge settings - and endorse suitable consumer resources in alignment with existing consumer publications processes.

[8] Royal Brisbane and Women's Hospital has submitted the application of the QH Guideline in practice (with the recommendation for Daniella to "*strongly consider VTE prophylaxis*") presented complex challenges in a busy emergency department setting, for example, with varying experience and confidence levels. The difficulty was not unique to Royal Brisbane and Women's Hospital, as other Metro North Health facilities adopted local VTE procedures and protocols.

84. The Royal Brisbane and Women's Hospital has advised that the lessons learned have all been completed, save that the Patient Risk Assessment form review is still in progress.

85. Royal Brisbane and Women's Hospital has further advised that, since the review was provided to the Coroners Court in 2024, a clear and easy VTE prophylaxis guideline has been implemented for use at Royal Brisbane and Women's Hospital. This document includes a straightforward risk algorithm, specifically for patients with lower limb injury, to ensure clinicians at all levels of experience are able to assess patients with consistency and safety. The Royal Brisbane and Women's Hospital Guideline highlights that non-weight bearing is used to inform risk, rather than the type of immobilisation being used. It also recommends low molecular weight heparin rather than aspirin for patients at high risk of developing VTE. There has also been active engagement with the Statewide Anticoagulation Working Group to enhance the QH Guideline.

86. Royal Brisbane and Women's Hospital has also prepared clear and concise visual "Stop the Clot" factsheets and video tools, respectively, for clinicians and patients. The patient fact sheet clearly explains the risks of blood clots with surgery and immobility, including pulmonary embolism and death, with measures to help prevent these risks from arising.

87. The Advisory Group is also progressing development of a proposal aimed at further improving management of VTE prevention and treatment across Royal Brisbane and Women's Hospital. The Royal Brisbane and Women's Hospital is also planning a fully integrated electronic medical record in late 2026 with planning for integration of digital risk assessment forms, including VTE risk forms.

88. I am satisfied the improvements made and proposed by the Royal Brisbane and Women's Hospital, after reflecting on Daniella's case, will significantly improve VTE risk assessment and prevention planning for patients attending the hospital with lower limb injuries and therefore reduce the chance of a future similar event.

Queensland Ambulance Service review

89. Professor Stephen Rashford, Queensland Ambulance Service Medical Director, conducted a comprehensive review of the management of the family's emergency call received at 8.51pm on 21 May 2023. After carefully reviewing the audio call, Professor Rashford was satisfied that that the QAS response was timely having regard to the operational demand on the service at the time.

90. Professor Rashford acknowledged the triple zero call had been complex with Daniella's fluctuating clinical condition with cardiac arrest, recovering respiratory efforts, and seizure activity. Overall, the instructions given to Daniella's family for starting and ceasing cardiopulmonary resuscitation was in line with the Queensland Ambulance Service's standard operating procedures. The ambulance was dispatched within one minute and 26 seconds, enroute within nine seconds, and at the property to take over care within 17 minutes.

91. Professor Rashford, in assessing the matter, asked the Quality Assurance Unit, Queensland Ambulance Service State Communications Development to also review the triple zero audio recording. This more focused review identified some technical non-compliance but no issues that affected the case allocation code, major call management priorities or the subsequent ambulance response.

92. Professor Rashford explained that emergency medical dispatch staff are provided with specific training in the delivery of pre-arrival instructions for cardiac arrest situations. They also have annual skills validation through training scenarios with a professional development officer. This includes mock triple zero calls that involve pre-arrival instructions and an annual out of hospital cardiac arrest simulation. The training scenario requires emergency medical dispatch to instruct on CPR and this is a mandatory training requirement.

Medical records and statements

93. I was assisted in this investigation by the very helpful reports and statements from Daniella's treating health practitioners and senior clinical administrators from Royal Brisbane and Women's Hospital. I would like to take this opportunity to thank them for their timely responses, for making appropriate concessions as a platform for learning making improvements, and for assisting this investigation.

Conclusion

94. I have sufficient information to make the necessary findings required by s 45(2) Coroners Act 2003 in relation to Daniella's death. I have reviewed the available medical information, treating practitioner statements, hospital review and responses, and the independent opinion of the expert cardiologist. I accept the forensic pathologist's report and conclusion about the cause of death.

95. I find that Daniella Jade Duchatel died tragically in the early hours of 22 May 2023 at The Prince Charles Hospital, Queensland, from pulmonary thromboembolism due to deep vein thrombosis (left leg) due to a fracture of the left tibia (surgically treated). Her death occurred in the context of other significant contributing conditions of obesity and coronary atherosclerosis, with severe 70% occlusion of her left anterior descending artery. The pathologist reported the clots were acute, with an estimated age of between two weeks to two months.

96. I have decided not to hold an inquest into Daniella's death. I have sufficient information to enable findings about her death. I have considered the hospital review, and more recent responses with updates about further improvements made. I am satisfied Royal Brisbane and Women's Hospital has identified the relevant gaps and made appropriate recommendations for improvement to help prevent similar deaths in future. A public hearing is unlikely to lead to additional improvements to VTE prevention management that could assist to prevent similar deaths in future. The factual dispute about Daniella being told it was okay to cease aspirin on 18 May 2023 is unlikely able to be resolved.

97. I am satisfied Daniella's death was likely preventable had there been an individual risk assessment and prevention plan with prophylaxis medication and clear education about movement and mobility from the time of her attendance in the emergency department on 16 April 2023. While ceasing the medication three days before her death was possibly contributory and significant, it is the earlier omission to recommend this treatment that more likely made the difference.

98. With the family's permission, I have decided to publish these findings to share the lessons learned from Daniella's death and to highlight the importance of VTE risk assessment and prevention planning, and the decision tools and resources available within the Queensland Health environment.

99. I extend my sincere condolences to Daniella's family and friends for their loss. Rest in peace Daniella.

Findings required by s 45 of the Coroners Act 2003

Identity of the deceased – Daniella Jade Duchatel

How the deceased died – Daniella died in circumstances where her specific risk factors for developing VTE were not assessed, identified or addressed with a documented VTE prevention plan, in accordance with the QH Guideline, that included blood thinning medication from her first presentation on 16 April 2023, or at her fracture clinic appointment on 21 April 2023. There was no assessment of her ability and motivation to comply with these recommendations, and no clear advice and education about the risks, including of death from a breakaway clot, if she did not follow the VTE prevention plan. I am satisfied that Daniella's death was likely preventable had blood thinning medication been prescribed from 16 April 2023, or at least from 21 April 2023, and taken as recommended following surgery with relevant education about the risks and the importance of compliance.

Place of death – The Prince Charles Hospital, Chermside, Queensland

Date of death – 22 May 2023

Cause of death – 1(a). Pulmonary thromboembolism, due to, or as a consequence of
1(b). Deep vein thrombosis (left leg), due to, or as a consequence of
1(c). Fracture of left tibia (surgically treated).

Other significant conditions
2. Obesity, coronary atherosclerosis.

I close the investigation.

Megan Fairweather
Coroner
CORONERS COURT OF QUEENSLAND
20 January 2026